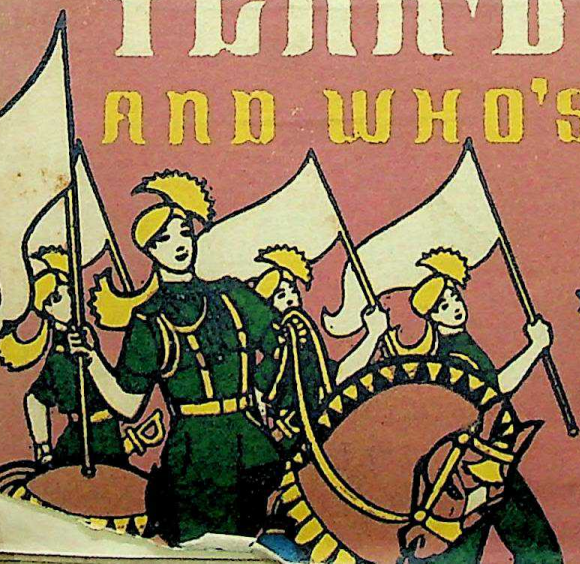


1966



HINDUSTAN YEAR-BOOK AND WHO'S WHO



Edited by
S.C. SARKAR

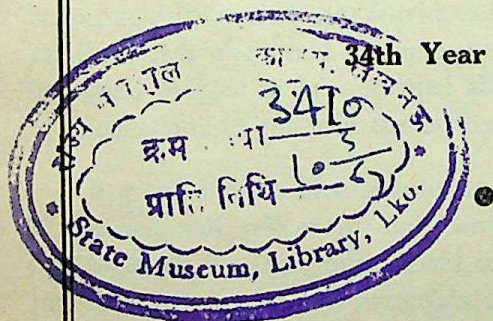
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HINDUSTAN YEAR-BOOK AND WHO'S WHO 1966

Edited by

S. C. SARKAR

Author of : *Book of General Knowledge, General Knowledge
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PREFACE

The editor wishes to state that the 34th annual volume of the "Hindustan Year-Book", in its present form, is a great improvement than its former volumes.

I have made strenuous efforts to give a comprehensive coverage to information regarding all Indian and World problems, changes in political and economic scenes in India and the World.

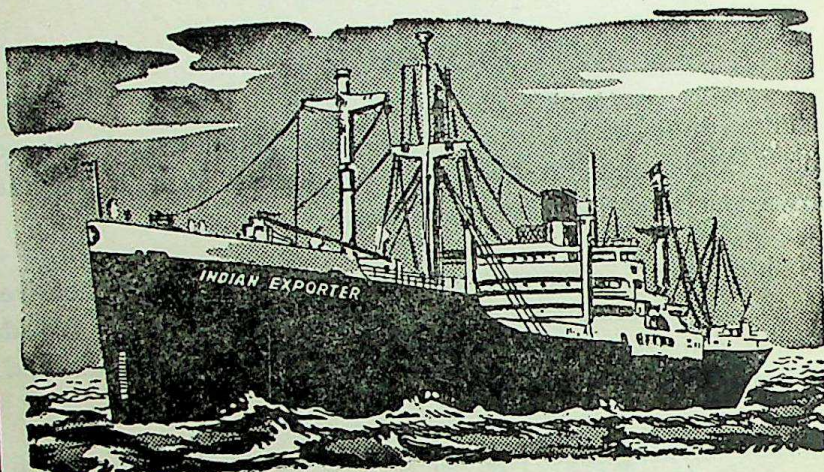
While revising this volume, I have constantly kept in my mind the radical changes in India's economic life. The reader will find that all the sections, particularly Industries, Commerce, National Income, Indian Economy etc. are thoroughly revised.

I believe that the reader will appreciate that although while compiling this volume I spared no pains to reflect the changes in to-day's India and the World to the maximum possible extent, yet there is a likelihood of some mistakes being crept in. I shall be highly obliged to be informed about the additions, ommissions or suggestions to enhance the utility of the subsequent editions.

For the success of this venture, I am grateful to the different Ministries and offices of the Government of India and other collaborators for their unreserved co-operation by way of furnishing me with necessary materials as well as to the enlightened readers for their valuable suggestions.

Calcutta,
14th March, 1966.

S. C. SARKAR
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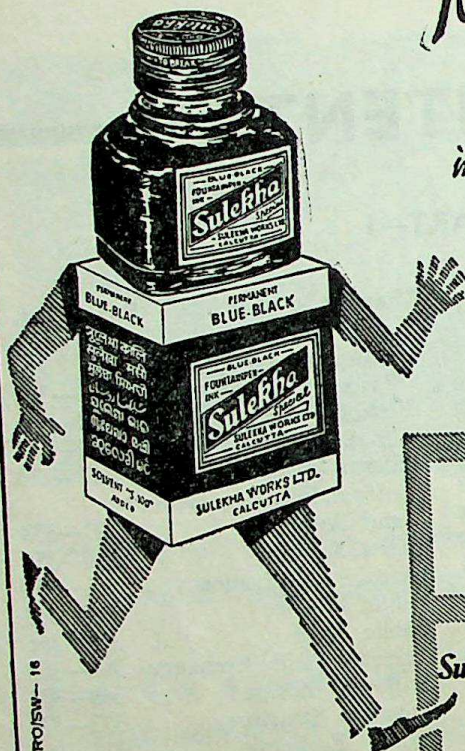
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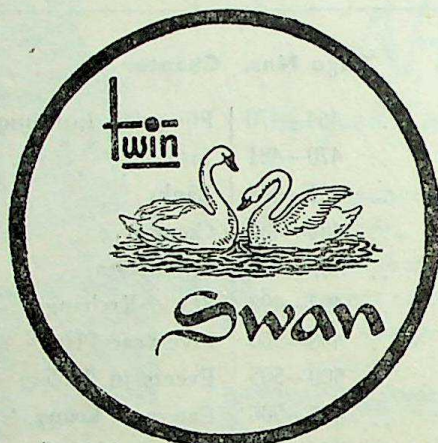
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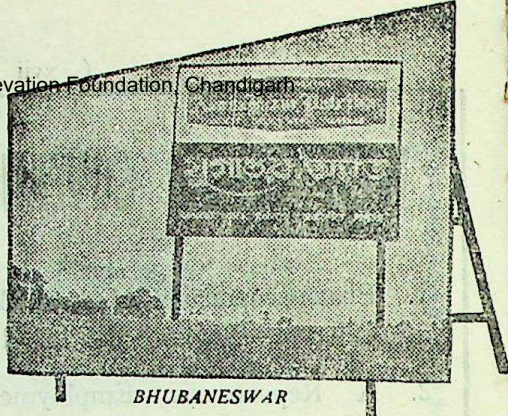
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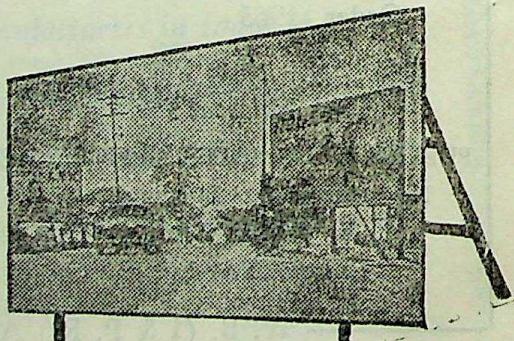
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HINDUSTAN YEAR-BOOK

Part I

INDIA AT A GLANCE

AREA— India is also known as *Bharat*. It is the seventh largest and the second most populous country in the world. It has an area of 3,267,500 sq. km. The country stretches 3,200 km. north to south. It has a land frontiers of 15,200 km. and a coast-line of 5,700 km.

Lying entirely in the northern hemisphere, the mainland extends between latitudes $8^{\circ}4'$ and $37^{\circ}6'$ north and longitudes $68^{\circ}7'$ and $97^{\circ}25'$ east.

In the north, India is separated from China by the Himalayas. Situated between the two countries is Nepal, and to its east, Sikkim and Bhutan. Mountains also separate India from Burma on India's eastern border. East Pakistan is wedged in between the Indian States of Assam and West Bengal. In the north-west, we have West Pakistan.

In the south, the country stretches crossing the Tropic of Cancer and forming into a peninsula with Arabian Sea to the west and Bay of Bengal, to the east. On the eastern tip of the country lies Ceylon.

PHYSICAL DIVISION— India can be divided into *three natural divisions*.

1. *The Himalayas.*
2. *The Plains of northern India.*
3. *The Deccan or Peninsula proper.*

(1) *The Himalayan region* extends across the northern border from Kashmir to the Burma frontier. This curves like a scimitar across the north of India to make an almost complete rampart. This region runs for 1,500 miles from the eastern extremity of Assam to the western limits of Kashmir with a breadth varying from 150 to 200 miles. Some of the highest peaks in the world are to be found in this region.

(2) *The Plains of northern India* are about 1,500 miles long, east to west, and from 150 to 200 miles broad. This is the home of more people per square mile than any other spot on the globe. The plain is broken by intermittent low-lying mountain ranges and is watered by India's three main rivers—the Ganges, the Brahmaputra and the Jamuna—which flow southward from the Himalayas to the Bay of Bengal.

(3) *The Deccan or Peninsula proper* is a tableland. It is bounded on three sides by mountains—on the north by the Vindhya and Satpura ranges, on the west by the Western Ghats, and on the east by the Eastern Ghats. Two coastal strips of flat land exist on the outer side of both Western and Eastern Ghats. This peninsular region is traversed by the rivers Narmada and Tapti, which flow into the Arabian Sea, and Mahanadi, Godavari, Krishna and Kaveri, which flow into the Bay of Bengal.

CLIMATE— Broadly speaking, the climate of India is controlled by two seasonal winds or monsoons. Of these, the south-west or summer monsoon blows over thousands of miles of warm ocean before it strikes India, at about the beginning of June, to bring 90 per cent of all the rain that falls. Rajasthan and several parts of the country get only a few inches a year. Bombay gets more than 60 and Cherrapunji in Assam 470.

By the end of September, the south-west monsoon begins to retreat,

and by the beginning of January, the north-east monsoon from the land blows steadily over India, the Bay of Bengal and the Arabian Sea. During the first four months of the year there is scarcely a place in India outside the Himalayas which receives a single inch of rain.

The climatic regions of India, i.e., according to rainfall, are as follows—(1) regions with more than 80 inches of annual rainfall, such as the West Coast, Bengal and Assam, (2) regions with 40 to 80 inches of rainfall, such as the north-east plateau and the middle Ganges valley, (3) regions with 20 to 40 inches of rainfall, such as Madras, southern and north-western Deccan and the upper Ganges plain. To these may be added the Himalayan region with heavy rainfall.

The Meteorological Department of India recognises four seasons—(1) Cold weather season (December-March); (2) Hot weather season (April-May); (3) Rainy season (June-September); and (4) the season of the retreating south-west monsoon (October-November).

SOIL OF INDIA— The Indian soil may be mainly classified under four different heads—(1) *alluvial soil*, (2) *black soil*, (3) *red soil* and (4) *laterite soil*.

Alluvial soil is formed by the silts brought by the rivers every year and deposited on their banks. It is very fertile and covers greater part of the northern India between the foot of the Himalayas and the northern slopes of the Vindhya and extends in a narrow fringe round the coastline of the peninsula. Territorially, they occupy Punjab, Uttar Pradesh, Bihar, West Bengal, parts of Assam and Orissa and also the coastal regions of southern India. The whole of the Indo-Gangetic plain is comprised in this area.

Red soil covers the whole of Madras, Mysore and south-east Bombay, east of Hyderabad and Madhya Pradesh to Orissa and Chota Nagpur. Northwards the red soil extends into the greater part of the Santhal Parganas and the Birbhum district of West Bengal, the Mirzapur, Jhansi and Hamirpur districts of Uttar Pradesh, Baghelkhand States of Central India, the Aravallis and the eastern half of Rajasthan.

Black soil or black cotton soil is best suited to deep-rooted crops, notably Indian strains of cotton. Secondary crops are groundnuts, linseed, pulses, rice (along the coastal tract) and tobacco. The black soil covers the greater part of Maharashtra and Gujarat, western part of Madhya Pradesh, Madhya Bharat and Hyderabad and some parts of Madras State. Black cotton soil is exceedingly compact and tenacious and sticky when wet. The water-holding capacity of this soil is good.

Laterite soil is derived by the atmospheric weathering of several types of rocks under monsoon conditions of alternating dry and wet periods. This soil is found on the summits of the hills of the Deccan, Madhya Bharat, Madhya Pradesh and of the Rajmahal Hills and Eastern Ghats and in certain parts of Orissa, Maharashtra, Malabar, West Bengal and Assam.

RIVER SYSTEM— Broadly, the rivers of India fall into two distinguished categories—the Himalayan system and the Deccan system.

The Indus, the Ganges and the Brahmaputra are the main rivers of the Himalayan system. Perennially fed by melting snow of the Himalayas they have continuous flow throughout the year. Most of

the tributaries rise in the Himalayas and are, for a considerable length of their courses, mountain torrents.

(1) The three great Himalayan rivers are :—(a) *Indus* river with its five tributaries—*Jhelum*, *Chenab*, *Ravi*, *Beas* and *Sutlej*—waters Punjab. The source of the Indus is on the northern slope of Mount Kailas in Tibet. For the first 500 miles of its course, it flows through deep gorges in the Himalayas, after which it turns south-west and descends on the plains. Thereafter, the river flows south to Sind and falls into the Arabian sea. Free India possesses very little of the Indus Basin. (b) *Ganges*—At a height of 13,000 ft. in the Himalayas near the glacier *Gangotri* is a small cave of ice, from which issues the river Ganges. Emerging from the icy cave as a small trickle, it gathers strength as it rushes down the mountain, and by the time it escapes from the Siwalik gorge near Hardwar to the plains, it is already a big river. Instead of flowing directly south, the river turns east in a great arc and flows across Uttar Pradesh and Bihar. During its easterly course, it collects the waters of *Jamuna*, *Gumti*, *Garga*, *Sarda*, *Gandak*, *Sone* and *Kosi*. Near the Rajmahal hills in Bihar the river swings south-east into West Bengal. Thereafter, it splits into several branches and meets the Bay of Bengal. (c) *Brahmaputra* has its source near the lake of *Manas Sarovar* in western Tibet. Running due east for nearly 800 miles in Tibet under the name *Tsangpo*, it cuts due south into Indian territory. Joined by the *Dibang* and the *Lohit*, the united stream takes the name of *Brahmaputra*. It rolls due west through the narrow Assam valley which is 500 miles long and 50 miles wide. Turning towards south-west at *Goalundo* in East Pakistan, it forges ahead to join the easternmost mouth of the *Ganges*—the *Padma*. Before the combined waters fall into the Bay of Bengal, they are joined by several other rivers, the most important amongst them being the *Meghna* in East Pakistan.

(2) *Rivers of the Deccan system*—These rivers rise among the hills of the Deccan plateau and are fed only by the monsoon rains, so that in the dry season some of them become almost waterless. The Deccan system falls under three categories—east-flowing rivers, west-flowing rivers and those which flow north and empty themselves into Gangetic river system. (a) The three important east-flowing rivers are the *Godavari*, *Krishna* and *Kaveri*, which rise in the Western Ghats. They follow the slope of the plateau, cut deep into it and fall into the Bay of Bengal. The *Mahanadi* and the *Damodar* are two other important east-flowing rivers. (b) The west-flowing rivers are the *Sharavati*, *Netrawati*, *Cheliyar*, *Pennani* and *Periyar*, all of which rise in the Western Ghats and fall into the Arabian Sea. (c) The north-flowing rivers gradually slope towards the north Indian plain, the most important of which is the *Chambal* which feeds the *Jamuna* and the *Sone* which join the *Ganges* near *Patna*. But the two biggest rivers are the *Narmada* and the *Tapti*, which flow westward and fall into the Arabian Sea.

CONSTITUTION— The Constitution of India came into operation on January 26, 1950. India is a Sovereign Democratic Republic with a parliamentary form of Government based on universal franchise. The executive authority is responsible for all its decisions and actions to the people through their elected representatives in the legislature. The Constitution of India embodies in its Preamble the resolve of the people of India to secure for all citizens : *Justice*, social, economic and political ;

Liberty of thought, expression, belief, faith and worship ; *Equality* of status and of opportunity and to promote among them all *Fraternity*, assuring the dignity of the individual and the unity of the nation.

The Constitution provides for a single and uniform citizenship for the whole of India. Birth within the territory of the Indian Union, descent from Indian parents, or residence for a period of five years at the commencement of the Constitution entitles one to be a citizen of India. Displaced persons from Pakistan are also enabled to become citizens after fulfilling certain conditions. Persons of Indian origin residing abroad can also become citizens by registering themselves as such with Indian diplomatic consular agencies in the countries of their residence.

The Constitution confers the right of vote to every person who is a citizen of India and who is not less than 21 years of age and is not otherwise disqualified under the Constitution or any law of the appropriate legislature on the ground of non-residence, unsoundness of mind, crime or corrupt or illegal practice.

The citizens have certain *Fundamental Rights* : Right to Equality, Right to Freedom, Right against Exploitation, Right to Freedom of Religion, Cultural and Educational Rights, Right to Property and Right to Constitutional Remedies. The Fundamental Rights are justiciable and any citizen can move the Supreme Court for their enforcement.

The Constitution lays down certain *Directive Principles of State Policy*. These principles, though not enforceable through courts of law, are regarded as fundamental in the governance of the country.

India is a *Union* of 16 States and 10 *Centrally-administered Territories* with President as the Head of the Union and the Governors as the Heads of the States. The President is elected by the elected members of the both Houses of Parliament and the Legislative Assemblies of the States for a term of five years. The two houses are known as House of the People (Lok Sabha) and the Council of States (Rajya Sabha). The first is composed of not more than 500 members elected directly from territorial constituencies on population basis, the second consists of not more than 250 members. There is a Council of Ministers with the Prime Minister at its head.

The system of Government in the 16 States is very similar to the national structure, though five of them have only a one-house legislature. The Governor of a State is appointed by the President of India for a five-year term and holds office at his pleasure. Also at the top of the State executive is a Council of Ministers with a Chief Minister at its head.

There are exactly 97 categories defined as being of all-India importance which include defence, foreign affairs, communication, currency, customs etc. These are the jobs of the national Parliament. The 16 States have 66 categories to deal with. This leaves 47 other subjects for both to handle.

Judiciary—The Supreme Court of India consists of a Chief Justice and fourteen judges appointed by the President. There is a High Court in each State.

FLAG—The National Flag is a horizontal tricolour with bands of deep saffron, white and dark green in equal proportions. On the centre of the white band appears an Asoka wheel in navy blue.

INDIAN RACES— India's 439.235 million people constitute 1/7th of the human race. Her population, second only to that of China, is made up of many racial strains. Various groups entered India at one time or the other between the paleolithic and historical periods.

Indian races were divided into seven broad groups by Sir Herbert Risley, such as, *Mongoloid*, *Indo-Aryan*, *Dravidian*, *Mongolo-Dravidian*, *Aryo-Dravidian*, *Scytho-Dravidian* and *Turko-Iranian*.

Next classification was made by Dr. J. H. Hutton in 1933 based on race-cum-language and cultural sequence. According to this theory, all people came to India from outside, such as—

(1) *Negritos* from Africa—the oldest people to have come to India, now surviving in the Andaman Islands and in Malaya. Traces of them seem to occur among the Nagas and in certain tribes in South India.

(2) *Proto-Australoids*—who came from the East Mediterranean area.

(3) *Early Mediterraneans*—who brought earlier forms of the Austric speech.

(4) *Civilised or Advanced Mediterraneans*—who became Dravidians in India.

(5) *Armenoids*—a specialised offshoot of the standard Alpine stock probably came with the civilised Mediterraneans (Dravidians) and spoke their language.

(6) *Alpines*—found in Gujarat and Bengal; earlier than Vedic Aryans but probably speaking Aryan dialects.

(7) *Vedic Aryans or Nordics*—who brought the Vedic Aryan (Sanskrit) speech.

(8) *Mongoloids*—not important for the greater part of India, as they touched only the northern and eastern fringes.

The most recent and authoritative classification divides the people of India into six main races with nine sub-types :—

(1) *Negrito*—is now almost extinct in India. A small group is still surviving in the Andamans, and its traces have been found among the Kadars and Palayans of Cochin and Travancore Hills, Irurals of the Wynad, the Angami Nagas of Assam and some of the Rajmahal tribes like the Semangs of Malaya and the Papuans of New Guinea, hill-tribes of Bihar. They are related to the Asian and Oceanic but not to the African Negroes and Negritoës.

(2) *Proto-Australoids*—are related genetically to the Australians as well as the Europeans. They survive in a good many aboriginal peoples of the present-day India, although more or less mingled with other peoples. The majority of the tribal peoples of central and southern India belong to this group. Throughout the greater part of India, the Proto-Australoid peoples still live as the lower castes or sections of the Indian people.

(3) *Mongoloid Group*—is found in the mountainous zones of north and north-east India. This group is divided into (a) *Palaeo-Mongoloids* consisting of long-headed and broad-headed types. They form a dominant element in the tribes in Assam and on the Indo-Burmese frontier and among the less primitive types in Burma and in Chittagong; (b) *Tibeto-Mongoloids* are found in Sikkim and Bhutan. Their physical characteristics are : short and broad face with high cheek bones, a skin fold from the upper eyelid covering usually the inner eye-corner, giving

the eye a slit and oblique appearance, scanty hair on face and body, and light brown skin with an yellowish tint.

(4) *Mediterranean Group*—consists of (a) *Palaeo-Mediterranean*, medium-statured, dark-skinned and slight-built, found in Kannada, Tamil and Malayalam tracts; (b) *Mediterranean*, true European type found in Punjab and in the upper Gangetic valley and is supposed to represent civilised pre-Aryan Dravidian people of northern India, who contributed largely to the evolution of Hindu people and culture of North India; (c) *Oriental type*, sometimes called Semitic or Jewish, found in Punjab, Sind, Rajasthan, western U.P. and in some other parts of India.

(5) *Western Brachycephals*—consists of (a) *Alpinoid*, (b) *Dinarik* and (c) *Armenoid*. They seem to have evolved in the Central Asian mountain regions. Both Alpine and Dinarik varieties appear to have spread over the greater part of India, i.e., Bengal, Orissa, Kathiawar, Kannada and Tamil countries, Gujarat, West Coast of India, excepting Malabar. The Parsis of Bombay are allied to Armenoids.

(6) *Nordics*—are the Aryan-speaking group of India, who are responsible for India's Hindu civilization and seem to have come from the Eurasian steppe lands and entered India during the second half of the second millennium B.C. The Nordic elements are strong in North-West Frontier of India and in the south of Hindu-Kush range. Nordic elements are present in mixed form in Punjab, Rajasthan and in the upper Gangetic valley. They are also found among higher castes and groups. Nordic type also predominates in certain sections in India.

It has however been stated—"It must be clearly understood that no rigid separation is possible as there is considerable over-lapping of types."

RELIGION—Of 439.235 million people of India, 83.51 p.c. are Hindus, 10.69 p.c. Muslims, 2.44 p.c. Christians, 1.79 p.c. Sikhs, 0.74 p.c. Buddhists, 0.46 p.c. Jains and 0.37 p.c. others.

AGRICULTURE—India remains a predominantly agricultural country. There is hardly a crop of the tropical, sub-tropical or temperate zone, which is not grown in this country. Food crops occupy four-fifths of the cultivated land. The principal crops of India are rice, wheat, sugarcane, pulses, oilseeds, cotton, jute and tea. 69.5 p.c. of the total working force earns its livelihood from agriculture. Average size of landholding is 7.5 acres. India's 850 million acres are made up of 20 p.c. forests, 40 p.c. cultivated farm land, 20 p.c. fallow land, while the rest is barren. Rice covers more acreage than any other crops and is followed by wheat.

FAUNA—Indian climatic conditions have naturally developed a great variety of animal life, and the number of animal species is much greater than that in Europe.

In India, animals are chiefly seen in the valleys of the Himalayas (i.e. *Teraí Forests*) extending from Kashmir to the Brahmaputra valley, on the Eastern and Western Ghats and in the jungles of Madhya Pradesh and Madhya Bharat.

(1) *Wild Animals*—*Lion*, although at one time threatened with extinction, is now preserved in the Gir forest of Kathiawar. The chief beast of prey is *tiger*. The *leopard* is found in even greater numbers.

Among other wild animals to be found are the *bear, boar, wolf, fox, bison, buffalo, elephant and rhinoceros.*

(2) *Domestic Animals*—*Goats, sheep, horses, ponies, asses, mules, bullocks and buffaloes* are available here and there. *Camels* are seen in the desert districts of Rajasthan and Punjab. *Sheep* and *goats* are plentiful as are also *pigs, monkeys* and *deer* of all kinds that abound throughout the country.

(3) *Reptiles*—The rivers are infested with *crocodiles* and *alligators*. Poisonous *snakes* abound, the mostly deadly being the *cobra, krait* and *Russel's viper.*

(4) The *birds* are of tropical varieties. The birds of prey include *vulture, eagle* and *falcons* of all kinds. *Hérons* and *kingfishers* abound and are much sought after on account of their plumage. *Waterfowls* are numerous as are almost all the game birds, namely, *pigeons, patridges, quails* and *ducks* of many kinds.

(5) *Fish*—Most numerous fish are of the carp family. The finest fish from angler's point is *mahasher*, found in all streams. The richest and the most tasty fish of India is *hilsa*. Fishing waters, rivers and sea of Bengal and Madras are among the most extensive in the world.

DEFENCE—The supreme command of the armed forces is vested in the President. Administrative and operational control resides in the Army, Navy and Air Headquarters under the supervision of the Ministry of Defence.

The Army has four commands : Southern, Eastern, Western and Central, with headquarters at Poona, Calcutta, Simla and Lucknow respectively. A Territorial Force was inaugurated in October, 1949. A National Cadet Corps, with senior, junior and girls' divisions has also been raised.

The Indian Navy consists of an aircraft-carrier, two cruisers and a number of destroyers, frigates, minesweepers and auxiliary vessels. A naval aviation wing and a hydrographic office have also been set up. The Navy's air station is at Cochin.

The Indian Air Force is organised in five major formations, the Western, Eastern and Central Air Commands, and the Training and Maintenance Commands.

LANGUAGES—The Constitution of India accepts 14 regional languages. In addition, there are also English language and about 250 regional dialects in India. The most widespread of Indian languages is Hindi. The other important regional languages are Bengali, Tamil, Telugu, Gujarati, etc. The Dravidian languages prevalent in South India are Tamil, Malayalam, Telugu and Kannada.

SYSTEM OF NOTATION—The Indian numerical notation system differs from the European. Large numbers are punctuated as crores and lakhs and not in hundreds, thousands and million. A *lakh* is one hundred thousand (written as 1,00,000) and a *crore* is one hundred lakhs or ten million (written as 1,00,00,000).

CURRENCY—The principal unit of currency in India is the *rupee*, formerly divided into *annas* (16), *pice* (64) or *pies* (192). India adopted the decimal system of coinage from April 1, 1957, using the *rupee* of 100 *Naya Paise*.

INDIAN CHRONOLOGY

B.C.

- 3500-2500—Indus Valley Civilization.
- 1500-100—Rigveda compiled.
- 1000-500—Age of Ramayana, Mahabharata or Bhagwat Gita.
- 563-483—Birth & death of Buddha.
- 540-468—Traditional years of birth & death of Mahavira.
- 377—Buddhist Council at Vaisali.
- 327-325—Alexander in India.
- 323-184—Maurya Empire founded by Chandragupta.
- 273-232—Reign of Asoka.
- 190—Greek Kingdoms of N.-W. India.
- 58—Beginning of Vikrama Era.

A.D.

- 64-225—Kushan Dynasty in N. W. India, South Indian Kingdoms of Cholas, Cheras and Pandavas.
- 78—Accession of Kanishka.
- 320-475—Gupta dynasty; Golden Age of Indian art, science and literature; Ajanta Cave frescoes and Ellora Cave carvings.
- 335-376—Reign of Samudra Gupta.
- 376-415—Reign of Chandragupta II (Vikramaditya).
- 405-11—Fa-Hien's travels in Gupta Empire.
- 454—First Hun invasion.
- 480-90—Break-up of Gupta Emp.
- 606-647—Reign of Harsavardhana, King of Kanyakubja.
- 622—Beginning of Hijri Era.
- 629-645—Hiuen Tsang's travels.
- 711—Arab conquest of Sind by Mohammed-bin-Qasim.
- 730—Yasovarman of Kanyakubja.
- 735—First Parsi settlement.

- 760-1142—Palas of Bengal and Bihar.
- 960-1200—Chandellas of Bundelkhand.
- 1000-1026—Muslim invasion of India by Mahmud of Ghazni.
- 1050—Atisa Dipankara sent on Buddhist mission to Tibet.
- 1192—Defeat and death of Prithviraj, the last Rajput King of Delhi.
- 1206-1290—Establishment of Muslim rule in North India; Reign of Slave Kings.
- 1221—First Mongol invasion by Chengiz Khan.
- 1228—Conquest of Assam by the Ahoms.
- 1231-32—The Kutub Minar built.
- 1230—Foundation of Vijayanagar Kingdom.
- 1236—Death of Iltutmish—accession of Raziya.
- 1320-1414—Reign of Tughlak Sultans of Delhi.
- 1334-1342—Iban Batuta in India.
- 1347—Foundation of Bahmani Kingdom of Deccan.
- 1398—Invasion of Taimur.
- 1451-1526—Reign of Lodi Sultans of Delhi.
- 1469—Birth of Guru Nanak.
- 1486-1533—Life of Chaitanya, Saint of Bengal.
- 1494—Foundation of Agra by Sikandar Lodi.
- 1498—Vasco da Gama reached Calicut.
- 1510—Portuguese captured Goa.
- 1526—First Battle of Panipat.

Indian Chronology—(Contd.)

- Establishment of Mughal Empire by Babar. 1780—Ranjit Singh established Sikh Empire.
- 1556-1605—Reign of Akbar. 1784—Pitt's India Bill by British Parliament.
- 1564—Abolition of *Jizya* tax. 1790—Third Mysore War.
- 1565—Battle of Talikota—overthrow of the Vijayanagar Kingdom. 1793—Permanent Settlement of Bengal.
- 1571—Fatehpur Sikri founded. 1799—Death of Tipu Sultan.
- 1597—Death of Rana Pratap. 1829—Brahmo Samaj founded by Raja Rammohan Roy.
- 1600—East India Co. founded by Royal Charter. 1829—Prohibition of *Sati*.
- 1605—Death of Akbar. 1833—Death of Raja Rammohan Roy.
- 1612—1st English factory at Surat. 1835—Introduction of English as the medium of instruction.
- 1627-1657—Reign of Shah Jahan. 1839—Death of Ranjit Singh.
- 1627—Birth of Sivaji. 1839-42—Anglo-Afghan War.
- 1634—*Farman* permitting the English to trade in Bengal. 1853—Opening of railways and telegraphs.
- 1658-1707—Reign of Aurangzeb. 1854—Wood's Despatch on Education.
- 1666—Sivaji's visit to Aurangzeb's court and his imprisonment and escape. 1856—Annexation of Oudh and introduction of Hindu widow marriage.
- 1668—1st French Factory at Surat. 1857—Indian Mutiny.
- 1675—Execution of Tegh Bahadur, 9th Sikh Guru, by Aurangzeb. 1858—Transfer of India from E. I. Co. to British Crown.
- 1680—Death of Sivaji. 1861—Birth of Rabindranath Tagore.
- 1686-87—Fall of the Kingdoms of Bijapur & Golconda. 1869—Birth of Mahatma Gandhi.
- 1690—E. I. Company established trading centre at Calcutta. 1874—Great Famine of Bengal.
- 1698—The English obtained *Jamindari* of the three villages of Sutanati, Kalikata and Gobindapur—nucleus of Calcutta. 1875—Arya Samaj founded by Dayanand Saraswati.
- 1707—Death of Aurangzeb. 1885—First Meeting of the Indian National Congress in Bombay.
- 1734—Nadir Shah sacked Delhi. 1905—Partition of Bengal.
- 1757—Battle of Plassey; beginning of British rule in India. 1906—Foundation of the Muslim League.
- 1761—Third Battle of Panipat. 1911—Partition of Bengal revoked.
- 1765—Grant of Dewani of Bengal, Bihar & Orissa to E. I. Co. 1914—Gandhi returned to India from South Africa. Beginning of World War I.
- 1772—Warren Hastings appointed first Governor-General of Bengal. 1919—Montague-Chelmsford Reforms; Jalianwalabagh massacre
- 1775—Execution of Nand Kumar.

Indian Chronology—(Concl'd.)

- at Amritsar (13th April); Third Afghan War.
- 1921—Civil Disobedience Movement by Mahatma Gandhi.
- 1925—Death of C. R. Das.
- 1930—C. D. Movement started by Congress—1st session of the Round Table Conference.
- 1931—Gandhi-Irwin Pact.
- 1935—Govt. of India Act passed.
- 1937—Inauguration of Provincial Autonomy; Congress Ministries majority of Provinces.
- 1941—Death of Rabindranath Tagore.
- 1942—Cripp's Mission—Quit India Movement.
- 1943—Bengal Famine.
- 1946—Cabinet Mission's Plan—Interim Government with J. L. Nehru as Prime Minister and widespread communal riot.
- 1947—Partition of India—India became independent—Kashmir attacked by Pakistan.
- 1948—Martyrdom of Mahatma Gandhi (January 30). India's appeal to U.N. to stop aggression by Pakistan in Kashmir (January 2).
- 1949—India's new Constitution passed into law (26th Nov.).
- 1950—India became a Republic (26th Jan.).
- 1951—1st Five-Year Plan launched.
- 1952—First General Election in India.
- 1954—French Settlements in India merged to India—Doctrine of Panch Shila accepted.
- 1956—Indian States re-organised on linguistic basis—2nd Five-Year Plan launched.
- 1960—Partition of Bombay into Maharashtra and Gujarat.
- 1961—Goa occupied by India.
- 1962—China attacked India (Oct.).
- 1964—Death of Jawaharlal Nehru (27th May).
- 1965—Mt. Everest conquered by Indian expedition team.

INDIAN INFORMATION

STATES & TERRITORIES OF INDIA, 1961

States	Pop. in millions (round figures)	Pop. per sq. m.	Females per 100 males	Rate of Literacy per 1000
Andhra Pradesh	36	339	981	212
Assam	12	252	876	274
Bihar	46	691	994	184
Gujarat	21	286	940	305
Jammu & Kashmir	4	...	878	110
Kerala	17	1,127	1,022	468
Madhya Pradesh	32	189	953	171
Madras	34	669	992	314

		<i>Pop. in millions (round figures)</i>	<i>Pop. per sq. m.</i>	<i>Females per 100 males</i>	<i>Rate of Literacy per 1000</i>
Maharashtra	...	40	333	936	298
Mysore	...	24	318	959	254
Nagaland	...	3,69,200*	58	933	179
Orissa	...	18	292	1,001	217
Punjab	...	20	430	864	242
Rajasthan	...	20	153	908	152
Uttar Pradesh	...	74	649	909	176
West Bengal	...	35	1,032	878	293

Territories

Delhi	...	2.6	4,640	785	527
Himachal Pradesh	...	1.4	124	923	171
Andaman & Nicobar Is.	...	63,548*	20	617	336
L. M. & A. Islands	...	24,108*	2,192	1,020	233
Manipur	...	0.8	90	1,015	304
Tripura	...	1.1	283	932	202
Dadra & Nagar Haveli	...	57,963*	307	963	95
NEFA	...	0.3	11	894	72
Pondicherry	...	0.4	1,995	1,013	374
Goa, Daman, Diu	...	0.6	440	1,070	...

HILL STATIONS

	<i>Above sea level (ft.)</i>		<i>Above sea level (ft.)</i>
Almora (U.P.)	... 5,500	Lansdowne (U.P.)	... 6,060
Bangalore (Mysore)	... 3,000	Mahabaleswar (Maharashtra)	4,500
Bhowali (U.P.)	... 5,500	Matheran (Maharashtra)	... 2,650
Chakrata (U.P.)	... 7,000	Mount Abu (Rajasthan)	... 4,500
Cherrapunji (Assam)	... 4,500	Mussorie (U.P.)	... 6,580
Coonoor (Madras)	... 6,740	Nainital (U.P.)	... 6,400
Dalhousie (H.P.)	... 7,867	Ootacamund (Madras)	... 7,500
Darjeeling (W. Bengal)	... 7,168	Pahalgam (Kashmir)	... 7,200
Gulmarg (Kashmir)	... 8,870	Panchmarhi (M.P.)	... 4,500
Kalimpong (W. Bengal)	... 4,000	Ranchi (Bihar)	... 2,100
Kasauli (Punjab)	... 6,200	Ranikhet (U.P.)	... 6,000
Kodaikanal (Madras)	... 7,000	Shillong (Assam)	... 4,980
Kulu Valley (Punjab)	... 5,000	Simla (H.P.)	... 7,235

• In thousands.

NOTABLE BRIDGES

	ft.		ft.
Sone Bridge (Bihar) ...	10,052	Naini Bridge (All., 1865) ...	3,235
Godavari Bridge ...	9,096	Curzon Bridge (Allahabad, 1905) ...	3,200
Alexandra (Chenab) ...	9,088	Ravi Bridge (Pathankote-Jammu) ...	2,800
Mahanadi Bridge (Orissa) ...	6,912	Jumna Bridge (Delhi, 1866) ...	2,640
Izatt Bridge (Allahabad, 1912) ...	6,830	Vivekananda Bridge (Cal.) ...	2,610
Ganga Bridge (Mokamah, 1959) ...	6,078	Tapti Bridge (1872) ...	2,556
Narmada Bridge (1881) ...	4,687	*Howrah Bridge (1943) ...	2,150
Sarighat (Brahmaputra, 1963) ...	4,258	Jubilee Bridge (W. Bengal) ...	1,213
Sutlej Bridge ...	4,210	Hooghly Bridge ...	1,213
Dufferin Bridge (Banaras) ...	3,578		

MUSEUMS

Salar Jung Museum, Hyderabad.	Municipal Museum, Ahmedabad.
Archaeological Museum, Hyderabad.	Junagadh Museum, Junagadh.
Telleshwaram Museum, Hyderabad.	Bhavnagar Museum, Bhavnagar.
National Museum, Delhi.	Jamnagar Museum, Jamnagar.
National Art Gallery, Delhi.	Watson Museum, Rajkot (Gujarat).
Kumar Art Gallery, Delhi.	Indore Museum, Indore.
Delhi Fort Museum, Delhi.	Bhopal Museum, Bhopal.
War Memorial Museum, Delhi.	Sanchi Museum, Sanchi (M.P.)
Archaeological Museum, Mathura.	Central Museum, Nagpur.
Archaeological Museum, Gwalior.	Government Museum, Madras.
Central Museum, Jaipur.	Government Museum, Bangalore.
Ajmer Museum, Ajmer.	Chamarajendra Art Gallery, Mysore.
Alwar Museum, Alwar (Rajasthan).	Indian Museum, Calcutta.
Kotah Museum, Kotah (Rajasthan).	Victoria Memorial Hall, Calcutta.
Bharatpur Museum, Bharatpur.	Asutosh Museum, Calcutta.
Jodhpur Museum, Jodhpur.	Art in Industry Museum, Calcutta.
Victoria Hall Museum, Udaipur.	Bangiya Sahitya Parishad, Calcutta.
Ganga Museum, Bikaner (Rajasthan).	Asiatic Society, Calcutta.
Pratap Singh Museum, Srinagar.	National Library, Calcutta.
Municipal Museum, Allahabad.	Patna Museum, Patna.
State Museum, Lucknow.	Nalanda Museum, Nalanda (Bihar).
Bharat Kala Bhavan, Banaras.	Vaisali Museum, Vaisali (Bihar).
Saranath Museum, Banaras.	Buddha-Gaya Museum (Bihar).
Prince of Wales Museum, Fort Bombay.	National History Museum, Darjeeling.
Victoria & Albert Museum, Bom.	Orissa State Museum, Bhubaneswar
Baroda Museum, Baroda.	Gandhi Memorial Museum, Madurai.
Fateh Singh Museum, Baroda.	Saraswati Mahal Library, Tanjore

* Largest cantilever span bridge in India and the third largest cantilever bridge in the world.

INDIAN OBSERVATORIES

National Observatory.	Hyderabad Observatory.
Kodaikanal Observatory.	Sewalik Observatory (Himalayan Valley).

NATIONAL PARKS & GAME SANCTUARIES

Bandipur Sanctuary (Mysore).	Keoladeo Ghana Bird Sanctuary (Rajasthan).
Chandraprabha Sanctuary (U.P.).	Manas Sanctuary (Assam).
Corbett National Park (U. P.).	Mudumalai Sanctuary (Ootacamund).
Dachigam Sanctuary (Kashmir).	Periyar Sanctuary (Kerala).
Gir Forest (Gujarat).	Ranganthittoo Bird Sanctuary, (Mysore).
Hazaribagh National Park (Bihar).	Shivapuri National Park (M.P.).
Jaladapara Sanctuary (W. Bengal).	Vedanthangal Bird Sanctuary. (Madras).
Kanha National Park (M.P.).	
Kaziranga Sanctuary (Assam).	

HIGHEST HIMALAYAN PEAKS

		Height in ft.	Climbed in	Expedition
Everest	...	29,028	May, 1953	British.
Kanchanjunga	...	28,146	May, 1955	British.
Lhotse	...	27,923	May, 1956	Swiss.
Makalu	...	27,824	May, 1955	French.
Annapurna	...	26,926	June, 1950	French.
Manaslu	...	26,760	May, 1956	Japanese.
Cho-Oyu	...	26,750	Oct., 1954	Austrian.
Dhaulgiri	...	26,810	May, 1960	Swiss.
Nanga Parvat	...	26,660	July, 1953	Austro-German.

EVEREST EXPEDITIONS

1921—First reconnaissance by Col. Howard Bury, first reached North Col.	1938—Light mobile expedition by Tilman via North Col., given up for bad weather, 27,320 ft.
1921—Expedition by J. C. Bruce, 26,985 ft.	1951—Reconnaissance by Shipton to discover route from South Col.
1924—Expedition by Lt. Gen. E. F. Norton, 28,126 ft.	1952—Swiss Expedition by Dr. Wyss-Dunant, 28,210 ft. (reached by Lambert & Tenzing).
1933—Expedition by Hugh Rutledge, 27,400 ft.	1952—2nd Swiss Expedition by Chevalley, 26,560 ft.
1934—M. Wilson's lone attempt in which he lost his life.	1953—Expedition by Col. John Hunt, reached summit on 29th May (reached by Tenzing Nor-
1935—Shipton reached North Col.	
1936—Expedition by Hugh Rutledge, given up for bad weather.	

- gay and Sir Edmund Hillary), 29,028 ft.
- 1956—Third Swiss Exp. reached summit twice, 23rd and 24th May.
- 1960—Indian Expedition led by Brig. Gyan Singh, given up for bad weather.
- 1960—Chinese Expedition supposed to have reached summit on 25th May.
- 1962—Indian Expedition led by Major J. Dias, reached 28,600 ft. on 30th June.
- 1963—American Exp. led by Norman G. Dyhrenfurth reached summit on 1st May. Parties reached summit by South Col., 23rd May (reached by James Whitaker and Nawang Gombu).
- 1965—Indian Expedition led by Lieut-Commander M. S. Kohli reached summit (reached by Capt. A. S. Cheema and Nawang Gombu on 20th May; by Sonam Wangyal and Sonam Gyatso on 22nd May; by C. P. Vohra and Ang Kami on 24th May and Captain H. S. Ahluwalia, H. C. Rawat and Phu Dorji on 29th May).

HIGHEST INDIAN STRUCTURES

	feet		feet
*Kutub Minar (Delhi) ...	288	†Victoria Memorial (Cal.) ...	182
Rajabai Tower (University, Bombay) ...	260	Calcutta High Court ...	180
Brihadeswar Temple (Tanjore) ...	216	Taj Mahal (Agra) ...	178
Largest Gopuram of Arunachala Temple (Tiruvannamalai, Madras) ...	200	Buland Darwaja (Fatehpur Sikri) ...	176
Gol Gambuz (Bijapur) ...	198½	Largest Gopuram of Meenakshi Temple (Madurai) ...	152
Gopuram of Ekambarnatha Temple (Kanchipuram, Madras) ...	188	Ochterloney Monument (Cal.) ...	152
Char Minar (Hyderabad) ...	186	Puri Temple (Orissa) ...	142
		4 minarets of Taj (each) ...	137
		Lingaraj Temple (Orissa) ...	127
		Tower of Victory (Chittor) ...	122

GOVERNOR-GENERALS OF THE INDIAN UNION

Lord Louis Mountbatten, 1947-48.
C. Rajagopalachari, 1948-49.

PRESIDENTS OF INDIA

Rajendra Prasad (1st term), 1950-1957.
Rajendra Prasad (2nd term), 1957-1962.
Dr. S. Radhakrishnan, 1962—

* 379 steps.

† From ground level to the base of the victory figure.

VICE-PRESIDENTS OF INDIA

Dr. S. Radhakrishnan (*1st term*), 1952-1957.

Dr. S. Radhakrishnan (*2nd term*), 1957-1962.

Dr. Zakir Hussain, 1962—

CHIEF JUSTICES OF THE SUPREME COURT OF INDIA

Sir Harilal Kania.

Sudhi Ranjan Das.

A. M. Patanjali Sastri.

Bhubaneswar Prosad Sinha.

Mehr Chand Mahajan.

P. B. Gajendra Gadkar.

Bijan Kumar Mukherjee.

Koka Subba Rao (Offtg.).

INDIAN PARLIAMENT

Lok Sabha : Speakers—G. V. Mavlankar, 1952—56.

—M. Ananthasayanam Ayengar, 1956—1962.

—Hukam Singh, 1962—

Rajya Sabha : Chairmen—Dr. S. Radhakrishnan, 1952—1962.

—Dr. Zakir Hussain, 1962—

PRIME MINISTERS OF INDIA

Jawaharlal Nehru, 1947—27th May, June, 1964 (Care-taker Govt.).

1964.

Lal Bahadur Shastri, 9th June,

Gulzarilal Nanda, 27th May—9th

1964—

MILITARY CHIEFS OF INDIA

Army

General Sir R. M. Lockhart, 1948. General S. M. Srinagesh, 1955.

General F. R. R. Bucher, 1948. General K. S. Thimmaya, 1957.

General K. M. Cariappa, 1949. General P. N. Thapar, 1962.

General Rajendra Singji, 1953. General J. N. Chaudhury, 1962.

Navy

Air Force

Vice-Admiral Sir. E. Perry, 1948. Air Marshal R. J. Chapman, 1948.

Vice-Admiral C. T. M. Pizey, 1951. Air Marshal G. E. Gibbs, 1951.

Vice-Admiral S. H. Carlill, 1955. Air Marshal S. Mukherjee, 1954.

Vice-Admiral R. D. Katari, 1958. Air Marshal A. M. Engineer, 1960.

Vice-Admiral B. S. Soman, 1962. Air Marshal Arjan Singh, 1964.

INDIAN FELLOWS OF THE ROYAL SOCIETY

A. Carsetji (1841) J. C. Bose (1920) Meghnad Saha (1927)

S. Ramanujam (1918) C. V. Raman (1924) K. S. Krishnan (1940)

Birbal Sahani (1936) P. C. Mahalanobis S. K. Mitra (1958)

H. J. Bhaba (1941) (1945) T. R. Seshadri (1960)

S. S. Bhatnagar (1943) D. N. Wadia (1957) wari (1965)

S. Chandrasekhar (1945) S. N. Bose (1958) Panchanan Mahesh-

INDIANS IN THE BRITISH PARLIAMENT

Sir M. Bhowanagree (Conservative) Lord Sinha of Raipur (House of Lords).

Dadabhai Naoroji (Liberal).

Sapurji Saklatwala (Communist).

Lord Sinha, Second Baron of Raipur (House of Lords).

INDIAN PRIVY COUNCILLORS

- | | |
|------------------------------|-----------------------------|
| 1909—Syed Ameer Ali. | 1934—Sir Tej Bahadur Sapru. |
| Sir B. C. Mitter. | 1934—H. H. The Aga Khan. |
| 1921—V. S. Srinivasa Sastri. | 1936—Sir Akbar Hydari. |
| 1926—Lord Sinha. | 1939—Dr. M. R. Jayakar. |
| 1930—Sir D. F. Mulla. | 1941—Sir C. Madhavan Nair. |
| 1931—Sir Shadilal. | |

INDIAN PEERS OF THE BRITISH REALM

- Lord S. P. Sinha of Raipur (*b.* 1863).
Heir—Aroon Kumar Sinha (*b.* 1887).
Heir—Hon'ble Sudhindra Sinha (*b.* 1921).

INDIAN MEMBER OF THE U.S. CONGRESS

Dilip Singh Saund (*Democrat*)

INDIAN NOBEL PRIZE WINNERS

- | | |
|--------------------------|--|
| 1913—Rabindranath Tagore | 1930—Sir C. V. Raman (<i>Physics</i>). |
| (<i>Literature</i>). | |

INDIAN LENIN PEACE PRIZE WINNERS

- | | |
|--------------------------------------|--------------------------------|
| 1952 ... Dr. Safiuddin Kitchlu. | 1958 ... Sir C. V. Raman. |
| 1953 ... Major-General S. S. Sokhey. | 1960 ... Mrs. Rameswari Nehru. |
| | 1964 ... Aruna Asaf Ali. |

NATIONAL DAYS

- Army Day—15th January.
 Republic Day—26th January.
 Martyrs' Day—30th January (murder of Mahatma Gandhi).
 Jalianwalabagh Day—13th April.
 Independence Day—15th August.
 Mahatma Gandhi's Birthday—2nd October.
 Children's Day—14th November (birthday of J. L. Nehru).
 Territorial Army Day—18th November.
 Navy Day—21st December.

CONGRESS PRESIDENTS

(*First Session in 1885*)

- | | |
|--------------------------------|---------------------------------|
| 1885—Bom.—W. C. Bonnerji. | 1895 Poona—S. N. Banerjee. |
| 1886 Cal.—D. Naoroji. | 1896 Calcutta—M. R. Sayani. |
| 1887 Mad.—B. Tyabji. | 1897 Amraoti—C. Sankaran Nair. |
| 1888 Allahabad—George Yule. | 1898 Madras—A. M. Bose. |
| 1889 Bom.—Sir W. Wedderburn. | 1899 Lucknow—R. C. Dutt. |
| 1890 Calcutta—Sir P. S. Mehta. | 1900 Lahore—N. G. Chandavarkar. |
| 1891 Nagpur—P. Ananda Charlu. | 1901 Calcutta—Dinshaw Wacha. |
| 1892 Allahabad—W. C. Bonnerji. | 1902 Ahmedabad—S. N. Banerjee. |
| 1893 Lahore—D. Naoroji. | 1903 Madras—Lalmohan Ghose. |
| 1894 Madras—Alfred Webb. | 1904 Bombay—Sir H. Cotton. |

Congress Presidents—(Concl'd.)

1905 Banaras—G. K. Gokhale.	1930 No Session.
1906 Calcutta—D. Naoroji.	1931 Karachi—Sardar V. Patel.
1907 Surat—R. B. Ghosh	1932 Delhi—Seth Ranchhodlal.
1908 Madras—R. B. Ghosh.	1933 Cal.—Nellie Sen Gupta.
1909 Lahore—Pt. M. M. Malaviya.	1934 Bom.—Rajendra Prasad.
1910 Alla.—Sir W. Wedderburn.	1936 Lucknow—J. L. Nehru.
1911 Calcutta—Pt. Bishen N. Dhar.	1937 Faizpur—J. L. Nehru.
1912 Patna—R. N. Mudholkar.	1938 Haripura—Subhas Bose.
1913 Karachi—Syed Mahmud.	1939 Tripuri—Subhas Bose.
1914 Madras—B. N. Bose.	1940 Ramgarh—A. K. Azad.
1915 Bombay—Sir S. P. Sinha.	1941-45 No. Session.
1916 Lucknow—A. C. Majumder.	1946 J. L. Nehru.
1917 Calcutta—Annie Besant.	1946 Meerut—J. B. Kripalani.
1918 Bom. (Spl.)—Hasan Imam.	1947 Rajendra Prasad.
1918 Delhi—M. M. Malaviya.	1948 Jaipur—P. Sitaramaiya.
1919 Amritsar—Motilal Nehru.	1950 Nasik—P. D. Tandon.
1920 Cal. (Spl.)—Lala Lajpat Rai.	1951 New Delhi—J. L. Nehru.
1920 Nagpur—C. Vijaya Raghava- chariyar.	1953 Hyderabad—J. L. Nehru.
1921 Ahmedabad—Ajmal Khan.	1954 Kalyani—J. L. Nehru.
1922 Gaya—C. R. Das.	1955 Avadi—U. N. Dhebar.
1923 Cocanada—Mahomed Ali.	1956 Amritsar—U. N. Dhebar.
1923 Delhi (Spl.)—A. K. Azad.	1957 Indore—U. N. Dhebar.
1924 Belgaum—M. K. Gandhi.	1958 Gauhati—U. N. Dhebar.
1925 Kanpur—Sarojini Naidu.	1959 Nagpur—Indira Gandhi.
1926 Gauhati—Srinivasa Iyengar.	1960 Bangalore—N. Sanjiva Reddy.
1927 Madras—Dr. M. A. Ansari.	1961 Gujarat—N. Sanjiva Reddy.
1928 Cal.—Pt. Motilal Nehru.	1962 Bhavnagar—D. Sanjivaya.
1929 Lahore—J. L. Nehru.	1963 Patna—D. Sanjivaya.
	1964 Bhubaneswar—K. Kamraj.
	1965 Durgapur—K. Kamraj.

NOTABLE INDIANS

Abanindra Nath Tagore (7 Aug., 1871—5 Dec., 1951).
 Ahmed Khan, Sir Syed (17 Oct., 1817—27 March, 1898).
 Ajmal Khan, Hakim (1863—26 Dec., 1927).
 Ali Imam, Sir (11 Feb., 1869—1932).
 Ambedkar, Dr. B. R. (14 April, 1893—1956).
 Ambika Charan Majumdar (1851—1922).
 Amir Ali, Sir Syed (6 April, 1849—3 Aug., 1928).
 Amrit Kaur, Rajkumari (1889—1963).
 Amrita Sher Gill (1912—1941).
 Ananda Charlu, P. (1842—1908).
 Ananda Mohan Bose (23 Sept., 1847—20 Aug., 1906).
 Anandaram Barua (1850—1889).

- Ansari, Dr. M. A. (1880—10 May, 1936).
 Aurobindo Ghosh (15 Aug., 1872—5 Nov., 1950).
 Ashutosh Choudhury, Sir (12 June, 1860—23 May, 1924).
 Asutosh Mukherji, Sir (29 June, 1864—25 May, 1924).
 Aswini Kumar Datta (1856—1923).
 Azad, Maulana Abul Kalam (11 Nov., 1888—22 Feb., 1958).
 Badruddin Tyabji (8 Oct., 1844—19 Aug., 1909).
 Bankim Chandra Chatterji (26 June, 1838—8 April, 1894).
 Barindra Kr. Ghosh (5 Jan., 1870—18 April, 1959).
 Bhagat Singh (1909—28 March, 1943).
 Bhandarkar, Sir Ramakrishna (1837—24 Aug., 1925).
 Bhawanagri, Sir M. M. (1851—1933).
 Bhulabhai Desai (1877—1946).
 Bhupendra Nath Bose (1859—1924).
 Bidhan Chandra Roy, Dr. (1 July, 1882—1 July, 1962).
 Bipin Chandra Pal (1858—20 May, 1932).
 Birbal Sahani (14 Nov., 1891—10 April, 1949).
 Brahmhabandhab Upadhyaya (1861—27 Oct., 1907).
 Brojendra Nath Seal, Sir (1864—1938).
 Chandavarkar, Sir N. G. (1855—1923).
 Chittaranjan Das, Deshabandhu (5 Nov., 1870—16 June, 1925).
 Dadabhai Naoroji (4 Sept., 1825—30 June, 1917).
 Dayananda Saraswati (1827—30 Oct., 1883).
 Debendra Nath Tagore (15 May, 1817—19 Jan., 1905).
 Dinabandhu Mitra (1829—1 Nov., 1873).
 Dinshaw Edulji Wacha (1844—1936).
 Dwarka Nath Tagore (1794—1 Aug., 1846).
 Dwijendra Lal Roy (19 July, 1863—17 May, 1913).
 Gaganendra Nath Tagore (18 Sept., 1867—1938).
 Gandhi, Mahatma M. K. (2 Oct., 1869—30 Jan., 1948).
 Girish Chandra Ghosh (28 Feb., 1844—8 Feb., 1912).
 Gobinda Ballabh Pant (10 Sept., 1887—7 Mar., 1961).
 Gokhale, Gopal Krishna (9 May, 1866—19 Feb., 1915).
 Gopabandhu Das (1877—17 June, 1928).
 Gurudas Banerji, Sir (26 Jan., 1844—1918).
 Hari Nath De (12 Aug., 1877—30 Aug., 1911).
 Hasan Imam (31 Aug., 1871—1933).
 Iqbal, Sir Md. (22 Feb., 1876—22 April, 1938).
 Iswar Chandra Vidyasagar (26 Sept., 1820—29 July, 1891).
 Jadu Nath Sarkar, Sir (10 Dec., 1870—19th May, 1958).
 Jagadish Chandra Bose, Sir (30 Nov., 1858—23 Nov., 1937).
 Jatindra Mohan Sengupta, Desapriya (21 Feb., 1885—21 July, 1933).
 Jatindra Nath Das (27 Oct., 1904—13 Sept., 1929).
 Jatindra Nath Mukherjee (8 Dec., 1880—1915).
 Jawaharlal Nehru (14 Nov., 1889—27 May, 1964).
 Karve, Dr. D. K. (18 April, 1858—1962).
 Kashinath Trimbak Telang (30 Aug., 1850—19 Sept., 1893).
 Kesab Chandra Sen (19 Nov., 1838—8 Jan., 1884).
 Khudiram Bose (3 Dec., 1889—11 Aug., 1908).
 Krishna Gobinda Gupta (1851—1926).
 Krishna Kr. Mitra (1852—1937).

- Krishnan, Dr. K. S. (4 Dec., 1898—1958).
 Kristodas Pal (1834—1884).
 Lal Mohon Ghosh (1849—1909).
 Lala Lajpat Rai (1864—1928).
 M. N. Roy (1887—25 Jan., 1954).
 Madan Mohan Malaviya (26 Dec., 1861—12 Nov., 1946).
 Mahendra Lal Sarkar, Dr. (2 Nov., 1833—23 Feb., 1904).
 Meghnad Saha, Dr. (1893—1956).
 Michael Madhusudan Dutta (25 Jan., 1824—29 June, 1873).
 Mohammad Sayani Rahimtulla (5 April, 1847—4 June, 1902).
 Motilal Nehru (7 May, 1861—6 Feb., 1931).
 Nabin Chandra Sen (10 Feb., 1847—23 Jan., 1909).
 Nilratan Sircar, Dr. Sir (1 Oct., 1861—18 May, 1943).
 Panikkar, Dr. K. M. (3 June, 1895—1963).
 Phirozeshah Mehta, Sir (1845—1915).
 Prafulla Ch. Ray, Sir (2 Aug., 1861—6 July, 1944).
 Prasanna Kr. Tagore (1803—1868).
 Pratap Singh Kairon (1901—5 Feb., 1965).
 Premchand, Munshi (1880—1936).
 Premchand Roychand (1831—1907).
 Pyari Charan Sarkar (1823—30 Sept., 1875).
 Rabindra Nath Tagore (7 May, 1861—7 Aug., 1941).
 Radha Nath Sikdar (1813—17 May, 1870).
 Raj Narain Bose (7 Sept., 1826—18 Sept., 1900).
 Rajendra Nath Mukherjee, Sir (23 June, 1854—1936).
 Rajendra Prasad, Dr. (3 Dec., 1884—1963).
 Ramananda Chatterji (31 May, 1865—30 Sept., 1943).
 Ramanujam, Srinivas (1877—26 April, 1920).
 Ramesh Chandra Dutt (13 Aug., 1848—29 Nov., 1909).
 Ramkrishna Paramahansadeva (20 Feb., 1833—16 Aug., 1886).
 Ram Mohan Roy, Raja (10 May, 1774—27 Sept., 1833).
 Ranade, Mahadeo Govinda (18 Jan., 1842—16 Jan., 1901).
 Ranjitsinji, Prince (10 Sept., 1872—2 April, 1933).
 Rashbehari Bose (1880—1944).
 Rashbehari Ghosh, Sir (23 Dec., 1845—1921).
 Ravi Varma, Raja (1848—1907).
 Sankaran Nair, Sir S. (11 July, 1857—1933).
 Sarat Chandra Bose (7 Sept., 1889—20 Feb., 1950).
 Sarat Chandra Chatterji (15 Sept., 1876—16 Jan., 1938).
 Sarojini Naidu (13 Feb., 1879—2 March, 1949).
 Satyamurthi, S. (19 Aug., 1889—1937).
 Satyendra Prasanna Sinha, Lord (24 March, 1863—1930).
 Shib Nath Sastri (31 Jan., 1847—23 Sept., 1919).
 Shyama Prasad Mukherjee, Dr. (1901—23 June, 1953).
 Shyamji Krishnavarma (4 Oct., 1857—31 Mar., 1930).
 Sisir Kumar Ghosh (1842—10 Jan., 1911).
 Srinivasa Sastri (1869—1946).
 Subhas Chandra Bose (23 Jan., 1897—18 Aug., 1945).
 Subrahmanya Iyer (1 Oct., 1842—Dec., 1924).
 Subrahmanya Iyer (1856—1916).
 Surendra Nath Banerji, Sir (10 Nov., 1848—6 Aug., 1925).

Suresh Chandra Biswas, Colonel (1861—22 Sept., 1905).
 Tarak Nath Palit, Sir (1831—3 Oct., 1914).
 Taru Dutt (4 March, 1856—30 Aug., 1877).
 Tata, Sir Jamshedji (3 March, 1839—1904).
 Tej Bahadur Sapru, Sir (1875—7 Aug., 1948).
 Thyagraja (1759—1847).
 Tilak, Bal Gangadhar (23 July, 1856—31 July, 1920).
 U. N. Brahmachari, Sir (7 June, 1875—6 Feb., 1946).
 Vallabhbhai Patel (31 Oct., 1875—Dec., 1950).
 Vishnunarayan Bhatkhande (1860—1936).
 Visveswaraiya, Sir M. (1861—1961).
 Vithalbhai Patel (27 Sept., 1873—22 Oct., 1933).
 Vivekananda, Swami (12 Jan., 1862—4 July, 1902).
 W. C. Bonnerjee (29 Dec., 1844—21 July, 1906).

FIRST IN INDIA

- | | |
|--|--|
| <i>Largest Lake</i> —Wular (Kashmir). | <i>Longest electric train service</i> —Bombay to Poona. |
| <i>Highest Peak</i> —Nanda Devi (25,645 feet). | <i>Highest Gateway</i> —Buland Darwaja, Fatehpur Sikri (176 ft. high). |
| <i>Largest populated City</i> —Greater Calcutta (55.5 lakhs). | <i>Tallest Statue</i> —Statue of Gomateswara, Mysore (57 ft. high). |
| <i>Largest State</i> —Madhya Pradesh (1,71,217 sq. m.). | <i>Longest Platform</i> —Sonapur Platform (2,415 feet). |
| <i>Largest Forest</i> —Assam. | <i>Longest Road</i> —Grand Trunk Road (1,500 miles). |
| <i>Highest rainfall</i> —At Cherrapunji (Assam), yearly 426 inches in average. | <i>Highest Tower</i> —Kutub Minar, Delhi (288 ft. high). |
| <i>Largest Delta</i> —Sundarban Delta (8,000 sq. miles). | <i>Largest Dome</i> —Gol Gambuz, Bijapur (144 ft. in exterior diameter). |
| <i>Longest Bridge</i> —Sone Bridge (10,052 ft. long). | <i>Largest Fair of Animals</i> —Sonapur Fair. |
| <i>Longest Cantilever Span Bridge</i> —Howrah Bridge (2,150 feet). | <i>Biggest Zoo</i> —Zoological Gardens, Calcutta (270 acres in area). |
| <i>Largest Cave Temple</i> —Ellora. | <i>Biggest Museum</i> —Indian Museum, Calcutta. |
| <i>Longest Corridor</i> —Rameswaram Temple's Corridor (4,000 ft.). | <i>Most populated State</i> —Uttar Pradesh (Pop. : 7,37,46,401). |
| <i>Largest Mosque</i> —Jumma Masjid, Delhi. | <i>Longest Tunnel</i> —Jawahar Tunnel, linking Punjab and Kashmir, $1\frac{3}{4}$ mile long. |
| <i>Highest Dam</i> —Bhakra-Nangal Dam, Punjab (740 ft. high). | <i>Longest Dam</i> —Hirakud Dam, Orissa (15,748 ft.). |
| <i>Largest Sugar-cane producing State</i> —Uttar Pradesh. | <i>Highest Waterfall</i> —Jog Falls (Mysore), 850 ft. |
| <i>Most literate State of India</i> —Kerala (46.8 p.c.). | |

FIRST BEGINNINGS IN INDIA

- 1781—First Newspaper—Hickey's Cal. Gazette, 29 Jan. 1781.
1825—First issue of Postal Stamp in India in Sind.
1851—First Official Telegraph Line between Calcutta and Diamond Harbour (24 Prgs.), October.
1853—First Indian Railway, Bombay to Thana, 16th April.
1854—First Postage Stamp in India on 1st Oct.
1887—First Modern Steel Plant at Kulti.
1897-98—First Hydro-electric Station set up at Darjeeling.
1911—First Air-mail in India and the world from Bamrauli to Naini (Allahabad), 6 miles.
1925—First Electric Train Service between Bombay and Kurla.
1927—Wireless Broadcasting by a private company.
1929—First issue of Air-mail Stamp in India and the world.

FIRST AMONG INDIANS

- Indian Governor*—Lord Sinha of Raipur.
F.R.S.—A. Carsetji.
Congress President—W. C. Bonerjee.
Nobel Prize Winner—Rabindranath Tagore.
I.C.S.—Satyendranath Tagore.
Bar-at-Law—J. M. Tagore.
Judge, High Court—Ramaprasad Roy.
Baronet—Sir Cawasji Jehangir.
Governor-General of India—C. Rajagopalachari.
Lenin Peace Prize winner—Dr. Safiuddin Kitchlu.
Member, Viceroy's Executive Council—Sir S. P. Sinha.
Member, India Council—Sir K. G. Gupta.
Peer of the Br. Realm—Lord Sinha.
First Indian to stand for the membership of the British Parliament—Lalmohan Ghosh.
Wrangler, Cambridge University—A. M. Bose.
Woman Governor—Sarojini Naidu.
Woman President of the Congress—Sarojini Naidu.
Woman President of the U.N.—Mrs. Vijayalakshmi Pandit.
Woman Minister of the Legislative Assembly—Mrs. Vijayalakshmi Pandit.
Woman M.A.—Chandramukhi Bose.
Woman M.B.—Virginia Mary Mitra.
Woman Doctor—Kadambini Ganguli.
1st in I.C.S. examination—Sir Atul Ch. Chatterjee.
Member, British Parliament—Dadabhai Naoroji.
First Indian to reach Everest—Tenzing Norgay.
Woman Parachutist—Gita Chanda.
Woman High Court Judge—Anna Chandi (Kerala).
Winner, Victoria Cross—Khudadad Khan.
Member, Privy Council—Syed Ameer Ali.
Member, House of Lords—Lord S. P. Sinha of Raipur.
Commander-in-Chief—General K. M. Cariappa.
I.M.S.—Dr. Goodeve Chuckravarti.

<i>Test Cricket Player</i> —K. S. Ranjitsinji.	<i>Woman Ambassador</i> —Vijayalakshmi Pandit (to Russia).
<i>Woman Speaker</i> —Sushila Nayar (Delhi).	<i>Woman Barrister</i> —Miss Cornelia Sorabji.
<i>Woman Mayor</i> —Sulochana Modi (Bombay).	<i>Woman Pleader</i> —Regina Guha.
	<i>Woman Chief Minister</i> —Sucheta Kripalani.

PLACES OF INTEREST

Andhra Pradesh

Ajanta Caves—Famous for frescoes of the Buddhist era. The caves of Ajanta consist of 24 monasteries and 5 temples, some of which are 2,000 years old. They are excavated on a wall of almost perpendicular rock, 259 ft. high, sweeping round in a hollow circle and extending over a third of a mile from east to west. These frescoes are now ranked among the masterpieces of the world's art.

Aurangabad—It has world-renowned temples and monastic caves of Ellora and Ajanta. There is also the historical fort of Daulatabad, the Raoza, which contains the tomb of the Mughal Emperor Aurangzeb and his wife's tomb, 'Bibi-ka-Muqbara'.

Ellora Caves—Ellora cave temples, 34 in number, are perhaps the largest and most varied in India. There are three classes of caves—Hindu, Buddhist and Jain. Excavated in the scrap of a large rocky plateau, they are remarkable memorials of these great faiths. The most marvellous of all is the stupendous rock-cut temple of Kailasa, elaborately carved inside and outside. Hewn entirely out of solid rock, with its massive pillars and colonades, intricate galleries, painted ceilings and huge sculptures, Kailasa is superb.

Hyderabad—Capital of Andhra Pradesh. It is famous for Char Minar and Salar Jung Museum.

Assam

Kaziranga Sanctuary—This is the showplace of North-East India and stronghold of the fast disappearing rhinos.

Bihar

Buddha-Gaya—Here under a bodhi-tree, Gautama attained Buddhahood., King Asoka erected a temple near the tree. The temple of Buddha Gaya consists of a main tower, rising to a height of 170 ft. in the form of a slender pyramid level at the top and crowned by a bell-like stupa. There is now a museum.

Nalanda—Nalanda University was founded in the epoch of the Gupta Kings and became one of the largest universities of Asia. Hucin-Tsang studied in this university in the 7th century. He has left glowing accounts of its activities. It consisted of 10,000 scholars lodged in special hostels endowed by foreign kings. It flourished for 700 years when it was destroyed by fire by invaders. There is now a museum which con-

tains bronze and stone images and miscellaneous objects recovered on the site of the famous university.

Sarnath—In the "Deer Park" of Sarnath near Varanasi, Gautama Buddha preached his first sermon on Nirvana. Here was revealed the eight-fold path that leads to the end of sorrow. There is the great Buddhist Stupa, a stupendous stone structure, 104 ft. in height and 93 ft. in diameter. It commemorates the fact that here Gautama Buddha preached his doctrine to his first five disciples. The ruins of monasteries built more than 1,500 years ago, draw Buddhist pilgrims from all over the world. Here stands the famous Asoka Pillar of polished sandstone, whose lion capital has been adopted by the Indian Republic as the State emblem.

Varanasi—or Banaras is a sacred city of the Hindus. It contains numerous temples. Close by is the famous Hindu University.

Gujarat

Baroda—The princely ex-capital of a princely state. There is a museum and picture gallery founded in 1894.

Gir Forest—Gir forest's lions are the only ones to be found in Asia. There are about 300 lions in the area.

Jammu & Kashmir

Amarnath—Hindus make pilgrimage in August. The cave is almost 50 ft. high and 50 ft. deep, situated between two huge mountains known as Kailash and Bhaira. At the back of the cave are several ice stalagmites in the shape of *lingams*—the frozen images of gods, Siva, Parvati, Kartika and Ganesh—all self-made images of ice.

Kashmir—The beauty of Kashmir valley is so charming and magnificent that one is easily attracted by it. There are a number of Alpine lakes. The various Mughal gardens are at short distances from Srinagar. Gulmarg at a height of 8,500 ft. is known for its golf. Dal Lake is most colourful with its floating gardens and houseboats.

Kerala

In Kerala, Nature's manifestations and not monuments are top of the bill. The palm-fringed coast and the backwaters are the prize attraction. A trip to *Periyar Lake Wild Life Sanctuary* will be much appreciated. Here the visitor watches wild life in the comfort and security of a cruising motor launch. Wild elephants abound in the 300-sq. mile sanctuary and do not seem to take much notice of humans.

Madhya Pradesh

Gwalior—Famous for its Fort which is one of the most impressive strongholds of mediaeval India.

Jabalpur—Famous for marble-rocks. The rocks are situated at 13 miles upriver from Jabalpur and are magnesium limestone rocks over 100 ft. high.

Khajuraho Temples—The village of Khajuraho is in the Chattarpur district. Only about twenty temples are here to show its former glory. It flourished from the 9th to the 13th century. Kandariya Mahadeva Temple is by far the largest and the finest, others being Lakshmana, Viswanatha, Chitra Gupta and Devi Jagadamba. Khajuraho sculptures

mean multitude of figures in the friezes, such as gods and goddesses, celestial nymphs and hand-maidens, bold serpents, myriads of human females. But what major theme which has given Khajuraho its ambiguous reputation are the *mithuna* couples, "these rioting figures of love and lust."

Sanchi Stupa—Famous Buddhist stupa. It is a hemispherical monument of bricks or stones. Sanchi Stupa is one of the oldest (3rd-1st century B.C.) and best preserved stupas of India. It stands on the top of a small hill and is enclosed by the finest and oldest stone railing in India. It is 120 ft. in diameter and 56 ft. high. The most striking features of the Stupa are the gates which face four cardinal points and measure 28 ft. on the top of the third architecture and are profusely carved with scenes from Jataka stories. Near the Stupa is the new memorial, erected to preserve the remains of the famous disciples of Buddha—Sariputta and Mangalana.

Sirguja Frescoes—are the earliest dateable Indian paintings. These are a group of Buddhist frescoes (100 B.C.) on the walls of a cave at Sirguja.

Madras

Chidambaram—There is the world-famous temple of Nataraja or Siva in his aspect of the Cosmic Dancer. The inner wall of the temple has four *gopurams*, two of which contain perfect sculptural representations of the 108 postures relating to *Natya Sastra*.

Kanyakumari—The temple of Kanyakumari (the virgin Goddess) is a place worth visit. It is the *land's end* of India where the Bay of Bengal, Arabian Sea and Indian Ocean meet. This is one of the most picturesque spots of India.

Madurai—was the capital of Pandiyan kings and became famous in the 17th century under the Nayak kings. The huge temple of Madurai known as Meenakshi Temple (Goddess with fish eyes) is the most famous of the South Indian temples and one of the finest edifices of Dravidian architecture. It is dedicated to Siva and his spouse Meenakshi. The temple forms a parallelogram, 850 ft. by 750 ft. and is surrounded by nine *gopurams*, one of which is 150 ft. high. The most elaborate stone carving is found in the Hall of a Thousand Pillars.

Mahabalipuram—It is also known as Seven Pagodas. Monuments of Mahabalipuram are breath-taking display of masterful sculpture hewn out of solid rock, such as (1) Five Rathas, (2) Mahisasuramardini Mandapam, (3) Krishna Mandapam, (4) Arjuna's Penance, etc.

Rameswaram—At the extreme south-eastern limit of Indian peninsula stands Rameswaram. Here Rama himself is believed to have offered worship to Siva to expiate the sin of having killed in battle Ravana, the ten-headed ruler of Lanka. The temple of Rameswaram is probably the most perfect specimen of art in the Dravidian style. The great temple is in the form of a quadrangular enclosure, 650 ft. broad by 1,000 ft. long. The temple of Sri Ramanathswamy dates back to the 17th century. The glory of the temple is its corridors extending to total length of 4,000 ft.

Tanjore—The last capital of the Chola dynasty. The place is famous for its great Sri Brihadeswara Temple, with a 200-ft. high tower, known throughout the world for its massive architectural excellence.

Maharashtra

Elephanta Caves—It is about $6\frac{1}{2}$ miles north-east of Apollo Bunder in Bombay harbour. There are seven caves in all, but the main cave marked No. 2 which contains the Siva shrine, is the most important and contains the sculptured panels. The great three-faced *Trimurti* is the most striking among the sculptures in the caves. Other interesting sculptures in the cave are a group depicting the marriage of Siva and Parvati; Ravana attempting to move the Kailasa mountain, etc.

Mysore

Belur Temple—Known as Chenna Kesava Temple, it is one of those exquisite specimens of Hoysala architecture, built 1117 years ago by the Hoysala king, Vishnuvardhana.

Bijapur—Is the ancient city of the famous Adil Shahi dynasty. It is now in ruins and the gigantic structure called the *Gol Gambuz* contains a perfect whispering gallery. It is the second largest dome in the world. This has a floor area of 18,110 sq. ft. and is the largest space covered by any single dome, second largest being that of Pantheon at Rome. It was built in 1656 by Sultan Mohamed Adil Shah to be his last resting place. The 11-ft. wide world-famous whispering gallery hangs out in the interior of the building, 109 ft. 6 in. above the floor.

Gomateswara—Near the town of Sravana Belgola, is the giant figure of Gomateswara, the Jain sage. The figure is 57 ft. high and is carved out of a single stone at the top of a hill. The image is probably 2,000 years old.

Hampi (or Vijaynagar)—The ruins of this ancient city, covering an extent of about 10 sq. miles on the south bank of Tungabhadra River, stand witness to the rise and fall of the forgotten Hindu Empire, said to have been the finest and greatest in South India. Hampi is the ruins of Vijaynagar, the ancient capital of Vijaynagar Empire. The ruins are virtually a vast open-air museum of Hindu monuments in the Dravidian style of architecture.

Orissa

Bhubaneswar—The new capital of Orissa, contains the famous Lingaraj Temple, Mukteswar Temple and Parasurameswar Temple and other temples, such as Bhagavati, Parvati, Anant Vasudeva, etc. On the hills known as Udaigiri and Khandagiri, a few miles from Bhubaneswar, are caves once occupied by Jain monks, containing remarkable carvings, the earliest of which date back to the 2nd century B.C. The Great Lingaraj Temple is acclaimed as the very finest Hindu temple in all India and its tower can be seen for miles around. It is set in a huge walled-in compound with dozens of smaller votive shrines and really forms a world in itself. The Lingaraj dates from about the year 1000. The compound measures 520 ft. by 465 ft. and its curvilinear tower built entirely without mortar rises to a height of 127 ft.

Konark—Here stand the impressive remains of the Sun Temple, better known as Black Pagoda. Legend runs that the Sun-god was once seen here rising out of the sea in his golden chariot. Where his shadow

fell, devotees endeavoured to build a temple in the shape of the god's chariot, complete with 24 wheels and 7 horses.

Puri—One of the four holiest places in all India. The city is always full of pilgrims and the temple which draws them there is the enormous Jagannath—Shrine of the Lord of the Universe. The temple stands in a compound, 652 by 630 ft., surrounded by a 20-ft. high wall. South-west of Puri lies beautiful *Chilka Lake*, an estuary of the Bay of Bengal. It is 45 miles long and averages 10 miles in width.

Punjab

Amritsar—It is famous for the Golden Temple, the most sacred to the Sikhs, and the tank called the Pool of Immortality. The pool is enclosed by a wide marble-paved quadrangle, 204 ft. long, with an archway over it. In the centre of the pool is the Temple, a square building with marble inlaid walls and dome-shaped roof, under which shaded by a silken canopy lies *Granth Sahib*, the holy book of the Sikhs.

Rajasthan

Abu, Mount—Situated on an isolated plateau 4,500 ft. above the sea-level, it combines the pleasures of a hill resort with the interests of an archaeological excursion. It is now a Jain religious stronghold. The far-famed *Dilwara Temples* are situated here. Five in number, they date from the 11th, 12th and 13th centuries and are built entirely of marble. The carvings which decorate the interior walls and pillars of the temples are fantastically lavish. The temples are—the Vimala Vasahi, built in 1032 and the temple of the two brothers, Vastupala and Tejapala, built between 1197 and 1247. In the central shrine sits the figure of Adinath, the first Jain pontiff. The octagonal dome, decorated by finely carved human and animal shapes and processions, is supported by eight sculptured pillars. The ceiling is a mass of intricate fretted marble lace-work.

Ajmer—A city of antiquity and celebrity. It was in Ajmer that Sir Thomas Roe, the ambassador of King James I of England, presented his credentials to Emperor Jehangir in 1616. *Ana Sagar Lake* is famous for its picturesque surroundings. The place is famous for Darga Khwaja Sahib, the tomb of the great Muslim saint, Khwaja Muin-ud-din Chisti. The shrine contains the large drums and candlesticks taken by Akbar at the siege of Chittore and two mosques, one built by Akbar and the other by Shah Jahan. 7 miles to the west of Ajmer is the Pushkar in the midst of rocky hills. It is famous for its lake. The lake is regarded as the most sacred in India, and the temple of Brahma closed to the lake is supposed to mark the spot where the incarnation of the god took place. Close to Ajmer, at the foot of Taragarh hill, stands a rare specimen of ancient Hindu masonry, *Adhai-din-ka-Jhonpra*.

Chittorgarh—It is the ancient capital of Mewar State, now almost in ruins. The glory of Chittorgarh is the *Tower of Victory*, set up by Rana Kumbha in the middle of the 15th century to commemorate his triumph over the Muslim Kings of Gujarat and Malwa. It consists of nine stories and is 122 ft. high.

Jaipur—The most typical Hindu city built of rose-pink coloured stone, was founded in 1727 by Sawai Jai Singh II. There is also the

famous observatory, built about 1718 by the Maharaja Sawai Jai Singh. Hawa Mahal, Ram Niwas Gardens, Albert Hall and Museum are the other interesting places for visit. Seven miles from Jaipur is Amber, a deserted city with an old royal palace overlooking the lake at the entrance to a rocky mountain gorge, where Rajput architecture can be seen at its best. Known as *Amber Palace*, it possesses the world's best chamber of mirrors.

Udaipur—The city is raised on the shores of Lake Pichola. Maharana's palace stands on the crest of a ridge overlooking the lake.

Uttar Pradesh

Agra—Famous for the *Taj Mahal* and *Agra Fort*. It contains all the architectural glories of the Mughal Empire, such as Dewan-i-Khas, Moti Masjid, Jesmine Tower, Dewani-i-Am, the tomb of Akbar at Sikandra and the tomb of Itmad-ud-Daula. Originally built by Akbar, the *Agra Fort* saw many additions in the reign of Shah Jahan. Its walls, 70 ft. high with octagonal towers and crenellated ramparts, enclose many relics of old splendour, great courtyards, gateways, audience halls, mosques and royal apartments. In all, the walls around the Agra Fort measure a mile-and-a-half in circumference. *Taj Mahal* is the most famous tomb built by Shah Jahan in memory of his beloved wife Mumtaz Mahal. It rises with its slender minarets in the midst of magnificent gardens. The height of the dome is about 230 ft. *Taj Mahal* lies on the bank of the Jamuna River. It was built by a Persian, Ustad Isa. Directly under the dome lie the tombs of Mumtaz Mahal and Shah Jahan.

Fatehpur Sikri—Situated at a distance of 24 miles from Agra. Founded by Akbar in a lonely eminence on the spot where saint Salim Chisti foretold the birth of a son of Akbar. After Akbar's death, the city was deserted for lack of water supply. Interesting places are : imposing pile of great mosques measuring 542 ft. each and 538 ft. north and south, the tomb of saint Sheikh Salim Chisti, houses of Akbar's wives—Miriam and Jodhbai, Panch Mahal, Hiran Minar, Buland Darwaza (176 ft. high built in commemoration of the conquest of Khandesh), Ankh Michauli, etc.

Hardwar—Is situated at the place where the Ganges issues forth from the hills on its fertilizing career. Hari-Ki-Pari is a place of worship, which is a footmark of Vishnu imprinted on a stone into the upper wall of the *ghat*.

West Bengal

Darjeeling—A hill station of outstanding beauty. Seeing the sunrise from Tiger Hill is a matter of special interest.

Calcutta—It was the capital of India till 1911. Its show-places are the Indian Museum, Zoological Garden, Victoria Memorial, Ochterloney Monument, Jain Temple, Botanical Garden (Shibpur, Howrah).

Durgapur—It is regarded as one of the biggest steel towns of India. There is also other big technical establishments.

Murshidabad—It is a walled town founded by Nawab Murshid Kuli Khan. The things to be seen are : Hazarduari, Khosbagh, Moti Jheel, etc.

Santiniketan—Established by Rabindranath Tagore. It is a seat of Visva-Bharati University.

Delhi

Delhi, the capital of India since 1911, was once the capital of seven empires. *Red Fort* with imperial palace of Shah Jahan is the main attraction. It was built by Shah Jahan between 1639-1648. The fort is famous for Dewan-i-Khas, Pearl Mosque, etc. *Kutub Minar* in Delhi is one of the masterpieces of Indian technology and art. It is the highest stone tower in India, 238 ft. high. It was completed by Kutub-ud-din Aibak in 1199 and further developed by Iltutmish in 1229. It has five stories separated by projecting balconies. Only a few yards from Kutub Minar stands the famous *Iron Pillar* of Chandra Varman, Hindu king of Pushkaran. It is a solid pillar of wrought iron, about 16 inches in diameter and 23 ft. 8 inches in height. Purity of iron (99.97 p.c.) accounts for the absence of rust, despite its exposure to the sun and rain for over 1500 years. Known as India's finest and biggest mosque, Jama Masjid was built by Shah Jahan in Delhi during 1650-58. The Masjid based on a lofty basement, is 201 ft. in length by 120 ft. in breadth and is flanked by two minarets, each 30 ft. high.

CONSTITUTION OF INDIA

Sovereign Democratic Republic—The Constitution of India, which came into force on January 26, 1950, resolves to establish a sovereign democratic republic.

The Preamble embodies the resolve of the people of India to secure for all citizens :

Justice, social, economic and political ;

Liberty of thought, expression, belief, faith and worship.

Equality of status and of opportunity ; and to promote among them all,

Fraternity, assuring the dignity of the individual and the unity of the Nation.

States and Territories—The following are the *States* of India, each with a Governor as its head : Andhra Pradesh, Assam, West Bengal, Bihar, Maharashtra, Gujarat, Madhya Pradesh, Madras, Orissa, Punjab, Uttar Pradesh, Kerala, Rajasthan, Mysore, Jammu & Kashmir and Nagaland.

Union Territories are Himachal Pradesh, Delhi, Manipur, Tripura, Andaman & Nicobar Islands, Laccadive, Minicoy and Amindivi Islands, Pondicherry, NEFA, Dadra and Nagar Haveli, Goa, Daman & Diu and such territories as may be acquired.

Fundamental Rights—Fundamental Rights have been grouped under following seven heads—

Right to Equality—Discrimination against any citizen on grounds of religion, race, caste, sex or place of birth is prohibited. In public em-

ployment, the Constitution assures equality to opportunity for all. It has established social equality by abolition of title, local and foreign.

Rights to Freedom—guarantees : (a) freedom of speech and expression, (b) to assemble peacefully and without arms, (c) to form associations or unions, (d) to move freely throughout India, (e) to reside and settle in any part of India, (f) to acquire, hold and dispose off properties, (g) to practice any profession, trade or business.

Rights against Exploitation—Traffic in human beings is declared a punishable offence. So too is *begar* (forced labour) without payment or any form of forced labour except compulsory service for the State for public purposes.

Religious Freedom—Subject only to public order, morality, health and some other essential provisions, all persons are equally entitled to freedom of conscience and the right to profess, practise and propagate religion freely.

Cultural and Educational Rights—The Constitution provides for the protection of the interests of linguistic, cultural and religious minorities and their right to establish and administer their own educational institutions.

Rights to Property—No person shall be unlawfully deprived of his property, movable or immovable.

Right to Constitutional Remedies—The Constitution guarantees the right to every citizen to move the Supreme Court for the enforcement of all fundamental rights. And for that purpose the Supreme Court is given general powers to safeguard these rights as well as the power to propose particular remedies, such as *habeas corpus*, *mandamus*, etc.

Directive Principles of State Policy—The Indian Constitution lays down certain Directive Principles of State Policy enjoining the State to undertake within its means, a number of welfare measures. These are intended to assure citizens an adequate means of livelihood, raise the standard of living, improve public health, provide free and compulsory education for children, and assure that the operation of the economic system does not result in the concentration of wealth and means of production to the detriment of the common good. These principles, though not enforceable through courts of law, are regarded as fundamental in the governance of the country.

Franchise—The Constitution confers the right of vote to every person who is a citizen of India and who is not less than 21 years of age on a fixed date and is not otherwise disqualified under the Constitution or any law of the appropriate legislature on the ground of non-residence, unsoundness of mind, crime or corruption or illegal practice.

Citizenship—The Constitution provides for single and uniform citizenship for the whole of India. Birth within the territory of India, descent from Indian parents or residence for a period of five years at the commencement of the Constitution, entitles one to be a citizen of India. Displaced persons from Pakistan are also enabled to become citizens after fulfilling certain conditions. Persons of Indian origin residing abroad can also become citizens by registering themselves as such with Indian diplomatic consular agencies in the countries of their residence. No such

person who voluntarily acquires the citizenship of any foreign State is entitled to this right.

Union—India is a Union of 16 federated States and 10 centrally-administered Territories with the *President* as the head of the Union and the *Governors* as the heads of the States.

Union Executive—The Union Executive consists of the *President*, *Vice-President*, and a *Council of Ministers* with *Prime Minister* at its head.

(a) *President*—The President is the executive head of the Republic. All the executive powers of the Union, including the Supreme Command of the Defence Forces, are formally vested in the President and all executive actions are taken in his name. He is elected by an Electoral College consisting of the elected members of both Houses of Parliament and Legislative Assemblies of the States, by the system of proportional representation by single transferable vote.

The qualifications for the office of the President—(1) He should be a citizen of India; (2) must have completed the age of 35 years; and (3) is qualified for election as a member of the House of the People. He will not be eligible for election if he holds a job in Government, giving him financial rewards.

Term of office—The President holds office for five years and is eligible for re-election.

Salary and Allowance—The President draws a salary of Rs. 10,000 and usual allowance.

Impeachment—The President may be removed from his office by impeachment for any violation of the Constitution.

(b) *Vice-President*—is the *ex-officio* Chairman of the Council of States (*Rajya Sabha*). Any citizen of India aged thirty-five years and above and qualified for the membership of the Council of States, can be elected to this office by both Houses of Parliament at a joint sitting on the basis of proportional representation by single transferable vote. His term of office is five years. When the President is ill, or if he resigns or dies or is removed or is for any reason absent, his place will be taken by the Vice-President, till a new President is elected. The Vice-President may be removed from his office by a resolution of the Council of States passed by a majority of all the then members of the Council and agreed to by the House of the People.

(c) *Council of Ministers*—The Constitution provides for a *Council of Ministers* to aid and advise the President. The actual executive authority is discharged by the Prime Minister and the Council of Ministers appointed by him; all of them are collectively responsible to the Lok Sabha. The Council of Ministers holds office during the pleasure of the President.

The Council of Ministers as at present constituted comprises (i) Ministers who are members of the Cabinet; (ii) Ministers of State who are not Ministers of the Cabinet but hold Cabinet rank and (ii) Deputy Ministers.

(d) *Attorney-General of India*—is appointed by the President and shall hold office during the pleasure of the President to give advice on such legal matters and to perform such other duties of a legal character, as may from time to time be referred to him.

LEGISLATIVE—*Parliament*—The Legislature of the Indian Union

consists of the President and two Houses—(1) *Lok Sabha* (House of the People) and (2) *Rajya Sabha* (Council of States).

Lok Sabha—consists of not more than 500 members directly elected from the territorial constituencies in the States (the representatives of Jammu & Kashmir being appointed by the President, and not more than 25 members to represent Union Territories). The number of seats for each State is so allocated that the ratio between the number and population of the State is, as far as possible, the same for all States. Upto 1970, the President can nominate 2 members to the House of the People to represent Anglo-Indian community. Unless dissolved sooner, the term of the House is five years from the date of its first meeting.

Rajya Sabha—consists of not more than 250 members, of whom 12 are nominated by the President and the rest are elected. The nominated members should be men of learning and wide experience, such as artists, writers, scientists and social workers. The *Rajya Sabha* is not subject to dissolution, a third of its members retiring after every two years. The elections to the Sabha are indirect, the allotted quotas of the representatives of each State being elected by the elected members of the Legislative Assembly of that State in accordance with the system of proportional representation by means of a single transferable vote. The Vice-President of India is the *ex-officio* Chairman of the Council of States.

Powers and Privileges of the Parliament—The Constitution confers certain powers and privileges on members of the Houses of Parliament. No member of Parliament "shall be liable to any proceedings in any court in respect of anything said or any vote given by him in Parliament or any committee thereof, and no person shall be so liable in respect of the publication by or under the authority of either House of Parliament of any report, paper, votes or proceedings. The powers, privileges and immunities of members of each House of Parliament shall be such as may from time to time be defined by Parliament by law and until so defined, shall be those of the House of Commons of the Parliament of the United Kingdom, and of its members and committees."

The difference between the House of the People and the Council of States is as follows :

The difference is not merely in their size. The powers given to them are not the same. The function of both is to legislate but the greater part of this responsibility will be borne by the Lower House. A bill has to be passed by both the Houses before it becomes a law. In case there is a disagreement between the two Houses, a joint session of the two Houses is summoned to resolve the dead-lock. The opinion of the Lower House will ultimately prevail owing to its numerical majority. But it is to be noted here that the procedure regarding dead-lock relates only to bills other than money bills, for, as regards *money bills*, the provision of the Constitution is that sole power shall belong to the Lower House. Money bills cannot be introduced in the Council of States. They must, as a rule, originate in the House of the People.

JUDICIARY—The *Supreme Court of India* consists of a Chief Justice and 14 judges appointed by the President. The judges hold office till the age of 65.

The Supreme Court decides disputes between the Government of India and any State or States or between two or more States involving any

question of law or fact. Civil and criminal appeals of a certain kind from High Courts will also be heard by it. The Supreme Court is also competent to order the enforcement of Fundamental Rights. It has also Advisory Jurisdiction by which the President can refer to it any question of public importance. The law declared by it is binding on all courts of the country. There is a High Court in each State, which stands at the head of the State's judicial administration. Each High Court consists of a Chief Judge and a number of judges appointed by the President. Judiciary is independent of the executive and the legislative.

Appeal by Special Leave—Notwithstanding provision for regular appeals from the High Court (Arts. 132-4), there may still remain some cases, where justice might require the interference of the Supreme Court. So the Supreme Court has the power to grant special leave to appeal from the action of any court or tribunal, save military tribunals. The Article confers a special power which is to be exercised under exceptional circumstances.

Comptroller & Auditor-General— Articles 148 and 151 provide for the appointment of a Comptroller & Auditor-General of India by the President to keep watch on the accounts of the Union and the States. His duties and powers are prescribed under law made by Parliament. His reports submitted to the President and the Governors of States, are laid before each House of Parliament and the Legislatures of States respectively.

STATES & TERRITORIES— There are now two classes of administrative divisions—(1) *States* and (2) *Territories*. The States are Andhra Pradesh, Assam, Bihar, Maharashtra, Gujarat, Jammu & Kashmir, Kerala, Madhya Pradesh, Madras, Mysore, Orissa, Punjab, Rajasthan, Uttar Pradesh, West Bengal and Nagaland. The Territories, all of which are centrally-administered, are as follows—Andaman & Nicobar Islands, Delhi, Himachal Pradesh, Laccadive, Amindivi and Minicoy Islands, Manipur, Tripura, Dadra and Nagar Haveli, Pondicherry, NEFA and Goa, Daman & Diu.

State Governors—The State Executive consists of the Governor and a Council of Ministers with a Chief Minister at its head. He is appointed by the President and holds office during his pleasure. Any citizen of India who has completed 35 years of age, is eligible for the appointment as Governor. The Governor holds office for a term of five years unless he resigns earlier. Besides official residence, the Governor draws a salary of Rs. 5,500 per month and other allowances and privileges. In case of Jammu & Kashmir, the Ruler of the State is called *Sadar-i-Riyasat*.

The Governor is assisted by a *Council of Ministers* with the Chief Minister at the head of the Council to aid and advise the Governor. The Chief Minister is appointed by the Governor and the other Ministers are also appointed by him on the advice of the Chief Minister. Ministers hold office during the pleasure of the Governor. The Council of Ministers is collectively responsible to the Legislative Assembly of the State.

State Legislatures—In every State there is a Legislature which consists of the Governor and the two Houses (except in case of Assam, Gujarat, Kerala, Orissa and Rajasthan, which have only one House—the Legislative Assembly).

The Legislative Assembly (*Bidhan Sabha*) of each State is elected by direct election on the basis of adult franchise. The total number of the Assembly members shall in no case be more than 500 or less than 60 chosen by direct election. Its normal life is five years. Some seats may be reserved for Scheduled Castes. The Governor may also nominate the representatives of Anglo-Indian community.

The total number of members of the *Legislative Council* of a State is not to exceed one-third of the total members in the Legislative Assembly of that State but in no case shall be less than 40. This is a permanent body; one-third of its members retire every second year. Half of its members are elected from local bodies, from among the graduates of three years' standing and teachers who have worked for at least three years. A third of the members are elected by the Legislative Assembly from among non-members and the rest are nominated by the Governor from among men of eminence in literature, art, science or social service.

The Legislative Assembly alone has power to originate money bills. The Legislative Council can make only recommendations in respect of changes within a period of 14 days of the receipt of the bill from the Assembly. This in no way affects the freedom of the Assembly to accept or reject the recommendations of the Council.

State Judiciary—The Constitution envisages a High Court for each State. The High Court consists of a Chief Justice and such other judges as the President may from time to time deem if necessary to appoint. The Chief Justice of a High Court is appointed by the President, in consultation with the Chief Justice of the Supreme Court and the Governor of the State. The procedure for appointing other judges is the same except that the Chief Justice of the High Court concerned is not consulted. They hold office until they attain the age of 62 years and are removable from office in the same manner as a judge of the Supreme Court.

Under Article 226, every High Court has the power to issue to any person or authority, including any Government within its jurisdiction, directions, orders or writs including writs which are in the nature of *habeas corpus*, *mandamus*, prohibition, *quo warrant* and *certiorari* or any of them for the enforcement of any rights conferred by Part II of the Constitution and for any other purpose. High Courts have powers of superintendence over all courts and tribunals within their jurisdiction.

UNION TERRITORIES— In the place of centrally-administered Part C States, the Constitution (7th Amendment) Act, 1956 substituted the category of Union Territories. Union Territories include Delhi, Himachal Pradesh, Manipur, Tripura, Andaman & Nicobar Islands, Laccadive, Minicoy & Amindivi Islands, Dadra and Nagar Haveli, Goa, Daman & Diu, Pondicherry and NEFA.

The Constitution (14th Amendment) Act of 1963 creates legislatures in Union Territories. The Act relates to the territories of Himachal Pradesh, Manipur, Goa, Daman and Diu, and Pondicherry. They will have new legislatures. The Act also provides that the number of seats allotted to Union Territories in the Lok Sabha shall be increased to a maximum of 25.

RELATION BETWEEN UNION & THE STATES— Parliament can legislate for the whole or any part of the territory of India and the

Legislature of a State for whole or any part of the State. No law, however, made by the Parliament can be considered invalid on the ground of extra-territorial jurisdiction. For the purpose of distributing legislative powers between the Centre and the States, three comprehensive lists have been drawn up. These lists are (1) *Union List*, (2) *Concurrent List*, and (3) *State List*.

The Parliament has "executive power" to make laws in regard to the matters mentioned in the first list, i.e., *Union List*. The *Concurrent List* means that matters shared between the Union and the States, such as criminal law, civil procedure, preventive detention, marriage and divorce, transfer of property other than agricultural lands, contracts, bankruptcy, etc.

There are 66 items in the *State List*. Some of them are police, administration of justice, prisons, local government, public health and sanitation, forests, fisheries, etc. The Legislature of a State has "exclusive powers" to make laws in matters mentioned in this list.

Jurisdiction over all other matters not mentioned in the *Concurrent* and *State Lists* belongs to the Parliament. This means that the Union acquires *residuary powers*.

As regards *Administrative Relations*, the executive powers of every State shall be so exercised as to ensure compliance with the laws made by the Parliament and any existing laws which apply in the State, and the executive power of the Union shall extend to the giving of such direction to the State as may appear to be necessary for that purpose.

Union executive is empowered to give direction to a State regarding construction and maintenance of the means of communication declared to be of national or military importance. Parliament can declare certain highways or waterways to be national highways or waterways. Union executive can also construct and maintain means of communication required in connection with naval, military and air force works. The President may, with the consent of the Government of a State, entrust to that Government functions in relation to any matter to which the executive power of the Union exists.

There is a provision for the formation of an *Inter-State Council* to investigate and discuss subjects in which the States have common interest and inquire into and advise upon disputes which may arise between the States.

Zonal Councils have been established by the States Reorganisation Act of 1956 to advise on matters of common interest to each of the five zones into which territory of India has been divided.

There are also *emergency provisions* in case there is a grave crisis created by war or internal disturbances in which President can give direction to the constituent States as to how their authority to be exercised. The President can suspend from operation several articles of the Constitution. During such period, Union Parliament has power to legislate with respect to any of the matters enumerated in the *State List*.

ELECTION—The superintendence, direction and control of directions to Parliament and Legislature of every State and of President and Vice-President including appointment of an Election Tribunal, is vested in an *Election Commission* to be appointed by the President. The Chief Elec-

tion Commissioner cannot be removed from his office except in the same manner as and on the like ground as a judge of the Supreme Court.

There is only one general electoral role for every territorial constituency and no person is ineligible for inclusion in such role on ground only of religion, race, caste, sex or any of them.

Backward Classes—Article 15 prohibits discrimination against any citizen on grounds only of religion, caste or the like. Art. 20(2) guarantees that no citizen shall be denied admission into any State-owned or State-aided educational institution on grounds only of religion, caste or the like. Art. 16 guarantees equality of opportunity to all citizens in the matter of employment under the State.

The Constitution makes special provisions for the representation of the Scheduled Castes and Tribes in the House of the People and in the Legislative Assemblies of the States and also for the consideration of their special classes in the matter of appointments.

FINANCIAL AND OTHER PROVISIONS— There is a provision in the Constitution for setting up of a *Finance Commission* to make recommendations to the President as to the distribution between the Centre and the Units of the net proceeds of certain taxes (like the income-tax, excise duties, some export duties, etc.), and the allocation between the States of such proceeds.

The Central and State Governments are required to set up respectively the *Consolidated Fund of India* and the *Consolidated Fund of the States*. All revenues received by the Government of India and the Government of a State are to be credited into their respective consolidated funds. No money is to be appropriated from the Consolidated Fund of India or of a State except in accordance with an Appropriation Act passed by the Parliament or the Legislature of the State concerned. Provision has also been made for the establishment of a *Contingency Fund of India* and a Contingency Fund for each State to meet unforeseen expenditure, pending proper authorisation by the appropriate legislature.

Supplementary Estimates—are distinguished from annual estimates which are included in the Annual Financial Statement or Budget. Notwithstanding the grant of annual estimates, the need for supplementary or additional grants may arise when the amount specified in the annual estimate is found insufficient for the purpose of the current year for some new service.

Authority of Audit—As for auditing the funds, the Constitution provides for the appointment of a *Comptroller and Auditor-General of India* by the President to keep watch on the finances and accounts of the Union. It is his responsibility to see that the expenses voted by the Parliament or the Legislature of a State and laid down in the Appropriation Fund are not exceeded or varied.

TRADE AND COMMERCE— The Constitution provides for the broad principles of freedom of trade, commerce and intercourse throughout the territory of India. Union Parliament and the State Legislatures are, however, authorised to prescribe limitations when there is scarcity of any particular commodity or for any other consideration of national or public interest. Subject to these restrictions, the State Legislatures are empowered to impose reasonable restrictions on the freedom of trade,

commerce or intercourse in the public interest. The Parliament has also power to appoint any authority it considers appropriate to enforce the foregoing provisions.

EMERGENCY AND SPECIAL PROVISIONS— If at any time, the President of India is satisfied that there has arisen a grave emergency created by war or external aggression or internal disturbance which threatens the security of India or any part of its territory, he can by declaration (a) give directions to Constituent States as to how the authority is to be exercised and (b) suspend from operation several Articles (268 to 280) of the Constitution). Another occasion on which the President can by proclamation assume to himself all or any of the functions of the Government of a State is in the event of failure of the State's constitutional machinery.

OFFICIAL LANGUAGE— Article 343 of the Constitution provides that the official language of India shall be Hindi in the Devnagari script and the form of numerals for official purposes shall be the international form of Indian numerals. English which was originally to continue as the official language upto January 26, 1965, will, under the Official Languages Act, 1963, continue to be used even after that in addition to Hindi.

AMENDMENT OF THE CONSTITUTION— Articles 368 provides for the amendment of the Constitution. The Constitution shall stand amended when the President gives assent to any bill for the purpose, after it is passed in each House of Parliament by a majority of not less than two-thirds of the members of the House present and voting. The only provision for the amendment, of which ratification by the Legislatures of not less than one-half of the States has also been prescribed, relates to the Supreme Court and High Courts, the distribution of legislative powers between the Centre and the States, the representation of the States in Parliament and the procedure for amendment of the Constitution.

Since the inauguration of the Constitution on January 26, 1950, there has been 17 Amendments of the Constitution. The passing of these Amendment Acts illustrate the flexibility of the Constitution, though it is written.

1. Constitution (First Amendment) Act, 1951—The first amendment was made by the Constitution (First Amendment) Act, 1951. By this, besides making minor changes in Articles 15, 19, 85, 87, 174, 176, 341, 342, 372 and 375, it added two new Articles 31A and 31B and the 9th Schedule.

By an amendment of clause (2) of Article 19, it has permitted reasonable restrictions to be imposed by law on the exercise of the right of freedom of speech and expression in the interest of friendly relations with foreign States or public order or on the ground of incitement of an offence. An amendment of clause (6) of Article 19 has, however, removed from the scope of judicial review, or on grounds of reasonableness, restrictions imposed on the right of citizens to carry on any trade, business, industry or service where such restrictions have been imposed with a view to enabling the State to undertake any scheme of nationalisation.

To Article 15, sub-clause (4) was inserted stating that the State can make special provision for the advancement of any socially and education-

ally backward classes of citizens or for the Scheduled Castes and the Scheduled Tribes.

Two new Articles, 31A and 31B, were inserted. Article 31A provides that no law providing for the acquisition by the State of any estate or of any rights therein or for the extinguishment or modification of any such rights shall be deemed to be void on the ground that it is inconsistent with, or takes away or abridges any of the rights conferred by any provisions of this Part (III).

To preserve the Zamindari Abolition Acts by various States in India, Article 31B provides that none of the Acts and Regulations specified in the Ninth Schedule nor any of the provisions thereof shall be deemed to be void, or even to have become void, on the ground that such Act, Regulation or provision is inconsistent with, or takes away or abridges any of the rights conferred by any provisions of Part II, and notwithstanding any judgment, decree or order of any court or tribunal to the contrary, each of the said Acts and Regulations shall continue in force.

2. Constitution (Second Amendment) Act, 1952—amended Article 81 for readjusting the scale of representation in the House of the People, necessitated by the completion of the 1951 census.

3. Constitution (Third Amendment) Act, 1954—substituted entry 33 of the Concurrent List in the 7th Schedule by a new one, including food-stuffs, cattle fodder, raw cotton and jute as additional items, whose production and supply can be controlled by the Centre, if expedient in the public interest.

4. Constitution (Fourth Amendment) Act, 1955—amended Articles 31, 31A and 305 and added a few more entries to the 9th Schedule. The amendment of Art. 31 (2) provides that when the State compulsorily acquires private property for a public purpose, the scale of compensation prescribed by the authorising legislation would not be called in question in a Court. The Article 31A was amended so as to exclude the temporary taking over of a property by the State, either in the public interest or to secure its better management, from the compensation clause. The amendment of Art. 305 was in the nature of a saving clause for laws providing State monopolies. Seven new entries were also added to the 9th Schedule.

5. Constitution (Fifth Amendment) Act, 1955—substituted the provision to Art. 3 by a new one, empowering the President to fix a time limit by State Legislatures to express their views on proposed Central laws affecting the area and boundaries, etc., of their respective States.

6. Constitution (Sixth Amendment) Act, 1956—added a new entry 92A to the Union List of the Seventh Schedule relating to taxes on the sale and purchase of goods in the course of inter-State transactions and the relevant clauses under Articles 269 and 286 on the same subject.

7. Constitution (Seventh Amendment) Act, 1956—This Act came into force on 1st November, 1956. It was passed for the reorganisation of the States. It involved not only the establishment of new States and alterations in State boundaries but also the abolition of the three categories of the States and the classification of certain areas as Union Territories. This led to the amendment of Article 1 and the First Schedule to

the Constitution. Among the other important Articles which were affected by this Amendment were Articles 81 and 82 which were substituted by new ones; Article 131 on the original jurisdiction of the Supreme Court; Article 168 providing for bicameral legislatures in certain States; and Articles 216, 217, 220, 222 and 224 dealing with the High Courts. Two new Articles 350A and 350B were added to implement the recommendations of the States Reorganisation Commission regarding constitutional safeguards for linguistic minorities.

8. Constitution (Eighth Amendment) Act, 1959— amended Article 334 so as to extend the special provision relating to reservations of seats for the Scheduled Castes and the Scheduled Tribes and representation of Anglo-Indians by nomination in the House of the People and Legislative Assemblies of States, for a further period of ten years from January 26, 1960.

9. Constitution (Ninth Amendment) Act, 1960— amended the First Schedule to the Constitution to give effect to the transfer of certain territories to Pakistan in pursuance of the agreement between the Governments of India and Pakistan in September, 1958.

10. Constitution (Tenth Amendment) Act, 1961— This Amendment incorporates former Portuguese enclaves of Dadra and Nagar Haveli within India and provides for their administration under the rule-making powers of the President (Art. 240).

11. Constitution (Eleventh Amendment) Act, 1961— obviates the necessity of a joint meeting of the two Houses of Parliament (Art. 66) by forming them into an Electoral College for the election of the Vice-President. It also amends Art. 71 so as to make it clear that the election of the President or the Vice-President shall not be challenged on the ground of any vacancy for whatever reason in the appropriate Electoral College.

12. Constitution (Twelfth Amendment) Act, 1962— The twelfth amendment was passed in March, 1962, as from December 20, 1961, the territories of Goa, Daman and Diu became part of the territory of India. From that date also they are being administered as a Union Territory in accordance with Article 240 of the Constitution. And also to specifically include these territories as a Union Territory in the First Schedule to the Constitution and to amend Art. 240 (1) so as to empower the President to make regulations for the peace, progress and good government of these areas.

13. Constitution (Thirteenth Amendment) Act, 1962— created Nagaland as the sixteenth State in the Indian Union (Art. 371A).

14. Constitution (Fourteenth Amendment) Act, 1962— It creates legislature in Union Territories. The Act relates to the territories of Himachal Pradesh, Manipur, Goa, Daman and Diu, and Pondicherry. They will have new legislatures on the pattern that prevailed in some of the former Part 'C' States. The Act also provides that the number of seats allotted to Union Territories in the Lok Sabha shall be increased to a maximum of 25.

15. Constitution (Fifteenth Amendment) Act, 1963—It makes the President of India in consultation with the Chief Justice of India, the final arbiter in a dispute about a High Court Judge's age and shortens the hitherto dilatory procedure for disciplinary action against Government employees.

16. Constitution (Sixteenth Amendment) Act, 1963—empowers the States to enact any legislation imposing reasonable restrictions on the exercise of Fundamental Rights in the interest of sovereignty and integrity of India. The Act amends clauses 2 and 4 of Article 19 of the Constitution. It also amends Articles 84 and 173 and the forms of oath in the Third Schedule to the Constitution so as to provide that every candidate for the membership of Parliament or State Legislatures, Union and State Ministers, members of the Parliament and State Legislatures, Judges of the Supreme Court and High Courts and Comptroller and Auditor-General of India should take oath to uphold the sovereignty and integrity of India.

17. Constitution (Seventeenth Amendment) Act, 1964—This Act amends Article 31 with a provision that where any law provides for the acquisition by the State of any land held by a person under his personal cultivation, the State cannot lawfully acquire any portion of such land within the ceiling limit unless the law ensures compensation payable at the market value. It also redefines the expression "estate" and extends protection to 64 State land enactments so that their validity is not questioned.

SOME NOTES—*Inter-State Council*—The President has power to establish Inter-State Council for (1) enquiring into and advising upon disputes between the States, (2) investigating and discussing subjects of common interest between the States and Union, (3) to impart greater cohesion to the federal structure and to harmonise the relation between the units.

Public Accounts Committee—It is stated in the Constitution that the reports of the Comptroller and Auditor-General of India relating to the accounts of India shall be submitted to the President who will cause them to be laid before the each House of Parliament. But either House of Parliament is too large a body; hence the function of examining the reports of the Comptroller and Auditor-General is entrusted by Parliament to a committee known as *Committee of Public Accounts*.

Regional Committee is an inter-State institution which has been created in only two States of Andhra Pradesh and Punjab in view of their special linguistic and cultural problems.

SCHEDULES

First Schedule (Articles 1 and 4)—1. *States*—Andhra Pradesh, Assam, Bihar, Gujarat, Kerala, Madhya Pradesh, Madras, Maharashtra, Mysore, Orissa, Punjab, Rajasthan, Uttar Pradesh, West Bengal, Jammu & Kashmir, Nagaland.

2. *Union Territories*—Delhi, Himachal Pradesh, Manipur, Tri-

pura, Andaman & Nicobar Islands, Laccadive, Minicoy and Amindivi Islands, Pondicherry, NEFA, Goa, Daman and Diu, Dadra & Haveli.

Second Schedule (Part A)—Provisions as to the President and the Governors of States. The following emoluments per mensem shall be paid to—

The President	...	...	Rs. 10,000
The Governor of a State	...	...	Rs. 5,500

The President and the Governors of the States shall also be paid such allowances as were payable respectively to the Governor-General of India and the Governors of the corresponding Provinces immediately before the commencement of this Constitution.

—(Part B)—Omitted by the Constitution (Seventh Amendment) Act, 1956.

—(Part C)—Provisions as to the Speaker and the Deputy Speaker of the House of the People and the Chairman and the Deputy Chairman of the Council of States and the Speaker of the Legislative Assembly and the Chairman and the Deputy Chairman of the Legislative Council of a State.

—(Part D)—Provisions as to the Judges of the Supreme Court and of the High Courts.

Chief Justice of Supreme Court per mensem	Rs.	5,000
Any other Judges of Supreme Court per mensem	„	4,000
Chief Justices of High Courts	...	4,000
Any other Judges of High Courts	...	3,500

—(Part E)—Provisions as to the Comptroller and Auditor-General of India.

Comptroller and Auditor-General of India per mensem Rs. 4,000.

Third Schedule—Forms of Oaths or Affirmations.

Fourth Schedule—Allocation of seats in the Council of States—Andhra Pradesh 18, Assam 7, Bihar 22, Gujarat 11, Kerala 9, Madhya Pradesh 16, Madras 18, Maharashtra 19, Mysore 12, Orissa 10, Punjab 11, Rajasthan 10, Uttar Pradesh 34, West Bengal 16, Jammu & Kashmir 4, Delhi 3, Himachal Pradesh 2, Manipur 1, Tripura 1=224.

Fifth Schedule—Provisions as to the administration and control of Scheduled Areas and Scheduled Tribes.

Sixth Schedule—Provisions as to the administration of Tribal Areas in Assam.

Seventh Schedule—List I—Union List; List II—State List; List III—Concurrent List.

Eighth Schedule—Languages: Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Malayalam, Marathi, Oriya, Punjabi, Sanskrit, Tamil, Telegu, Urdu.

Ninth Schedule (Article 31B)—Bihar Land Reforms Act, 1950; Bombay Maleki Tenure Abolition Act, 1949, etc.

THE CALENDAR

NATIONAL CALENDAR—Saka Year— The Government of India have adopted a uniform National Calendar, based on the Saka era, for civil purposes. This Calendar has been adopted with effect from March 22, 1957 corresponding to Chaitra 1, 1879 Saka. The year A.D. 1966 is 1888 of the revised Saka era.

The pre-eminence of the Saka era derives from the fact that it was the earliest to be introduced in India by the Saka ruling powers and was used exclusively by the Sakadvipi Brahmins (the astrologer caste) for calendar-making and for casting horoscopes since 1st century A.D. This was done on the basis of *Siddhantic* (scientific) astronomy evolved from old Indian calendar conceptions, which were put on a scientific basis by blending them with astronomical conceptions prevalent in the West in the 3rd century. The Saka era is 78 years behind the Christian era. The Saka Year commences on the first lunar Chaitra or the first solar Vaisakha in different parts of India.

Chaitra is the first month of the year. It consists of 30 days in the common years and 31 days in a leap year. The five months following the month of Chaitra consist of 31 days each and the last six months all have 30 days. The dates of the reformed Indian Calendar has thus a permanent correspondence with the dates of the present Gregorian Calendar, the corresponding dates being Chaitra 1, March 22 in a common year and March 21 in a leap year; Vaisakha 1, April 21; Jaisthya 1, May 22; Ashada 1, June 22; Sravana 1, July 23, Bhadra 1, August 23; Asvina 1, September 23; Kartika 1, October 23; Agrahayana 1, November 23; Pausa 1, December 22; Magha 1, January 21; and Phalguna 1, February 20.

INDIAN CALENDAR— The *Vikrama* or *Samvat* era is most widely used, specially in northern India, Rajasthan, Gujarat and is believed to have been established by Vikramaditya, king of Ujjain, to commemorate his victory over Saka kings. But there is a dispute over the identity of Vikramaditya, as there were so many kings bearing this name. It commenced on February 23, 57 B.C. Samvat is a luni-solar year. The year A.D. 1965 is therefore, the year 2023 of the Vikrama era.

Bengali year was originally a reckoning for agricultural and revenue purposes, instituted at the time of Akbar. In 1555-6 A.D. corresponding to Hijri, it became the *Fasli* or harvest era of northern India and was adopted as official era in Bengal.

*Other Eras—*The *Buddha* era dates from 543 B.C. and *Chaitanya* era from 1047 A.D.

*Kali Yuga—*The oldest era of India is the *Kali Yuga*. The *Kali Yuga* began on the 18th Feb., 3102 B.C. Thus the *Kali Yuga* is 5068 in 1966.

MAHOMEDAN CALENDAR— The Mahomedan era dates from the Hijra or the flight of Mahomed from Mecca to Medina (July 16, 22 A.D. in the Gregorian Calendar).

The Moslem year has an average length of 354 days 8 hours 48 minutes and is divided into 12 months of 30 and 29 days alternatively. There

is a cycle of 30 years, 19 of which have 354 days and 11 have 355 days, the extra day being added to the last month of the year. Since the method of calculation does not correspond to the solar year, months and seasons do not always correspond.

CHRISTIAN CALENDAR— Until 1582 the Calendar used in all Christian countries was the Julian Calendar, in which the last year of all centuries was a leap year. By the sixteenth century this had caused a difference of 10 days between the tropical and calendar years. In 1582 Pope Gregory ordered that October 5 should be called October 15, and that of the years at the end of centuries only every fourth one should be a leap year. The new Calendar was called the *Gregorian Calendar* and was gradually adopted throughout the Christian world. It came to be used throughout British Dominions in 1752. By then there was a difference of 11 days between the tropical and calendar years, and September 3 of that year was reckoned as September 14.

Leap Year— The present ordinary calendar year consists of 365 days and in order to allow for hours, minutes and seconds unaccounted for, the leap year of 366 days was invented. This happens every 4th year, in years which can be divided by 4, except that unless century-years (i.e. 1800, 1900, 2000) can be divided by 400 they are not considered as leap years. Thus 1900 was not a leap year, but 2000 will be one.

JEWISH CALENDAR— This is calculated from the supposed date of Creation (set at 3,760 years 3 months before the birth of Christ). The ordinary Jewish year has 354 days and is made up of 12 months. Every 19 years, however, there are 7 years of 384 days and this adjustment brings the Jewish Calendar into line with the regular solar year. The Jewish months have 30 and 29 days alternately and are called Tishri, Marcheshvan, Kislev, Tebet, Shebat, Adar, Ve-Adar, Nisan, Iyar, Sivan, Tammuz, Ab, Ellul. In years of 384 days an extra month of 30 days, called Ve-Adar, is inserted after Adar. The Jewish New Year's Day comes sometime between Sept. 5 and Oct. 5 in the Gregorian Calendar.

ZOROASTRIAN CALENDAR— is employed by Zoroastrians in India and Iran, began on June 16, 632 A.D.

BUDDHIST CALENDAR— It is reckoned from the death of Buddha in 543 B.C. (the actual date being 487 B.C.). The Buddhist year began on Vaisakhi Purnima. Buddha was born on a Vaisakhi full-moon day. He took his seat under the Bodhi tree at Gaya on another full-moon day to attain wisdom. It was on the full-moon day again that he left the world.

HINDU CALENDAR— Hindus have employed luni-solar cycles made by the combination of solar years and lunar years so treated as to keep the beginning of the lunar year near that of the solar year. In some parts of India solar years are used, while in other parts lunars are followed.

A solar year is divided into 12 months in accordance with the successive *Sankrantis* or entrances of the sun into the sidereal signs of Zodiac. The names of the signs are as follows :—

Mesha, the ram (Aries).
Vrishabha, the bull (Taurus).
Mithuna, the pair (Gemini).
Karkata, the crab (Cancer).
Singha, the lion (Leo).
Kanya, the maiden (Virgo).
Tula, the scale (Libra).

Vrischika, the scorpion (Scorpio).
Dhanus, the bow (Sagittarius).
Makara, the sea monster (Capricorn).
Kumbha, the water pot (Aquarius).
Mina, the fishes (Pisces).

But they are also known in some parts by another set of names, preserving connection with the lunar months—*Chaitra*, *Vaisakha*, *Jaisthya*, *Ashada*, *Sravana*, *Bhadra*, *Asvina*, *Kartika*, *Maghasirsa* or *Agrahayana*, *Pausa*, *Magha* and *Phalguna*.

The astronomical solar month runs from the moment of one *Sankranti* of the sun to the moment of the next *Sankranti* and as the signs of the Hindu Zodiac are all of equal length, 30 degrees, while the speed of the sun varies in accordance to the time of the year, the length of the month is variable.

The days of a solar month begin with sunrise. The days are named as follows : *Ravivara*, the day of the Sun (Sunday) ; *Somvara*, the day of the Moon (Monday) ; *Mangalvara*, the day of the Mars (Tuesday) ; *Budhvara*, the day of Mercury (Wednesday) ; *Brihaspativara*, the day of Jupiter (Thursday) ; *Sukravara*, the day of Venus (Friday) ; *Sanivara*, the day of Saturn (Saturday).

The lunar year consists of primary 12 lunar months. It is of two principal varieties according as it begins with a certain day in the month of *Chaitra* or with the corresponding day in *Kartika*. The present names of the lunar months were derived from 12 out of 27 *Nakshatras* supposed to be companions of the moon during 12 full-moon nights.

NAME OF MONTHS—*January* was named after *Janus*, Roman God. *February* after Roman God *Februus*. *March*, originally first month of the Roman Calendar, from *Mars*, the God of war. *April* from the Latin word *Aprilis*. May was named after *Maia*, Roman Goddess. June is derived from *Juno*, the mother of the gods. July is from *Julius Caesar*. *August* was named after *Augustus Caesar*. *September* is the seventh Roman month, from the Latin word meaning seven. *October* is the eighth Roman month, from Latin word meaning eight. *November* is the ninth Roman month meaning in Latin nine. *December* is the tenth Roman month, from Latin word meaning ten.

YEAR—The Tropical year is the time the earth takes to go round the sun : 365.422 solar days. The *Calendar year* consists of 365 days but a year of which the date can be divided by 4 without a remainder is called a *leap year*, with one day being added to the month of February. The last year of a century is a leap year, only when its number can be divided by 400 (e.g., 1900 was not a leap year but 2000 will be one).

SEASONS—*Summer*, the first and warmest season of the year, begins astronomically at the Summer Solstice when the Sun enters the sign of Cancer (about June 21). But in popular parlance Summer in India includes the months of April and May (*Baisakha* and *Jaisthya*). The second season, *Monsoon or Rainy*, starts sometimes in June and continues upto

August (Ashada and Sravana). The third season, *Autumn*, begins astronomically at the Autumnal Equinox (i.e. about September 21) when the Sun enters the sign Libra, the beginning of which sign is at the intersection of the Equator and the Ecliptic, the point in the sky where the Sun crosses from N. to S. of the Equator and causes the length of day and night to be equal all over the world. In India, it is popularly held to include the months of September and October (Bhadra and Asvina). In India, we count *Dewy* or *Hemanta* as the fourth season which is generally included in the Autumn season in western countries. This season ranges through October and November (Kartika and Agrahayana). *Winter*, the fifth and coldest season, begins astronomically at the Winter Solstice (i.e. about Dec. 21) when the Sun enters the sign of Capricornus and ends at the Vernal Equinox. In India the season is popularly held to comprise the months of November, December and January (Pausa and Magha). *Spring*, the sixth season of the year, is defined astronomically to begin in the Northern Hemisphere at the Vernal Equinox when the Sun enters the sign Aries (i.e. about March 21) and crosses the Equator, thus causing the day and night to be of equal length all over the world. In India, Spring in popular parlance comprises the months of February and March (Phalguna and Chaitra).

TIME—Standard time is reckoned from Greenwich, a village near London, England. It is recognised as the Prime Meridian of Longitude. The world is divided into 24 zones, each 15° of arc, or one hour in time apart. The meridian of Greenwich (0°) extends through the centre of the initial zone, and the zones eastward are numbered from 1 to 12 with the prefix 'minus' indicating the number of hours to be subtracted to obtain Greenwich Time. The zones westward are similarly numbered but prefixed 'plus' showing the number of hours that must be added to get Greenwich Time.

Local Time—When the system of local time is used, it is 12 o'clock (noon) at any region where the sun is at its highest point in the sky, and shadows are cast in a line extending north and south.

Longest and Shortest Days—The longest day is the day on which the sun is at its greatest distance from the equator; this is called the *Summer solstice*. It varies between June 21 and 22.

The shortest day is the day of the *Winter Solstice* and is now December 22 in every year; later in this century it will be December 21 in some years.

Summer Time—means putting forward of the clock by one hour during months of summer—was first introduced in the First World War. Its purpose then was to cut down the use of power for lighting; but in peace time it was continued so that people might enjoy longer summer evenings.

International Date Line—is an imaginary line extending north and south through the Pacific Ocean, and is the point at which the traveller must add or subtract a day from the calendar. On a journey westward across the Pacific, he must add a day (for example, by changing Monday, the 17th to Tuesday, the 18th); when travelling eastward, he is required to set the date back one day.

Indian Standard Time—The Indian Standard Time which is 5½ hours

ahead of the Greenwich Mean Time, was first adopted on 1st January, 1906. India now follows Indian Standard Time.

Dog Days—These are the days about the rising of the Dog Star, the hottest period of the year in the northern hemisphere. Roughly, they are between July 3 and August 25.

FESTIVALS

Hindu Festivals—*Dewali*—a festival of lights, held in October-November. This festival of lights is the celebration of Rama's victory over Ravana. In some parts of India it marks the beginning of the Hindu commercial year

Durga Puja—a national festival of Bengal, held in September-October. The celebration signifies the triumph of good over evil and the subjection of animal passions by human beings.

Dussera—It is a great festival of northern India. It takes place in the month of September or October. Celebration is for Rama's (virtue) victory over Ravana (vice). It is of special significance in Hindi-speaking areas and in Mysore.

Ganesh Chaturthi—a great Hindu festival of western India, takes place in August or September in honour of the Hindu God *Ganesh*. This festival is also known as Coconut Day.

Holi—Hindu festival on the full-moon day in March. It marks the advent of the spring. Coloured powders (*gulals*) and coloured water are sprayed over all.

Janmastami—It is held on the eighth day of the new-moon in July-August. An all-India celebration of the birthday of Lord Krishna.

Saraswati Puja—takes place on the fifth day (*panchami*) of the new-moon in January-February. It is an all-India festival in honour of *Saraswati*, goddess of learning and fine arts.

Sivaratni—It takes place on the 14th day of the new-moon in March. It is a festival in honour of Lord Siva of the Hindu Trinity.

Christian Festivals—*All Fool's day*—the first day of April, when for centuries throughout the Christendom, it has been customary to play irresponsible tricks on one's neighbours.

All Soul's Day—Day of prayer for souls of the dead.

Arbor day—annual tree-planting day, is generally observed throughout U.S.A., in parts of Canada and Great Britain.

Bank Holiday—a secular day in Great Britain, when by law banks are closed, and parties are exempt from presentment or payment of negotiable papers.

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Christmas—meaning Christ's Mass, is applied to the festival commemorating the birth of Christ, celebrated on December 25. The exact date of Christ's birth is unknown. The general adoption of December 25, first in the west and a little later in the east, dates from the 5th century.

Easter Day—Chief Christian festival as an anniversary of the resurrection of Jesus Christ—falls between March 22 and April 25.

Halloween—The name of the popular boisterous autumn celebration

August (Ashada and Sravana). The third season, *Autumn*, begins astronomically at the Autumnal Equinox (i.e. about September 21) when the Sun enters the sign Libra, the beginning of which sign is at the intersection of the Equator and the Ecliptic, the point in the sky where the Sun crosses from N. to S. of the Equator and causes the length of day and night to be equal all over the world. In India, it is popularly held to include the months of September and October (Bhadra and Asvina). In India, we count *Dewy* or *Hemanta* as the fourth season which is generally included in the Autumn season in western countries. This season ranges through October and November (Kartika and Agrahayana). *Winter*, the fifth and coldest season, begins astronomically at the Winter Solstice (i.e. about Dec. 21) when the Sun enters the sign of Capricornus and ends at the Vernal Equinox. In India the season is popularly held to comprise the months of November, December and January (Pausa and Magha). *Spring*, the sixth season of the year, is defined astronomically to begin in the Northern Hemisphere at the Vernal Equinox when the Sun enters the sign Aries (i.e. about March 21) and crosses the Equator, thus causing the day and night to be of equal length all over the world. In India, Spring in popular parlance comprises the months of February and March (Phalguna and Chaitra).

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meaning 'holy eve', the occasion being the eve of 'All Hallows' or 'All-Saints' Day', November 1. It has the Pagan origin.

St. Valentine's Day—a festival which falls on February 14. The origin of the observance of this day is uncertain. Among many interesting folk customs of mediaeval France and England was a gathering of young people on St. Valentine's eve. 'Valentine' means sweetheart.

Moslem Festivals— *Akheri-Chahar-Sumba*—held on the Wednesday of Safar, when Mahomed recovered a little from his last illness and bathed for the last time.

Bakr-id or *Id-uz-Zuha*—It is celebrated on the tenth day of the last month of the Muslim Year. According to Islam, Abraham, on being ordered by God to offer his son Ismael as a sacrifice, blind-folded himself and killed his son. On removing the cloth he found his son by his side and a ram slain on the altar.

Muharram—It is the tenth day of the month of Muharram. The mourning period lasts only for the first ten days. It commemorates the martyrdom of *Hassan* and *Hussain*, the Prophet's grandsons.

Id-ul-Fitr—It is held on the second day of the full-moon after Ramzan, and is holy, because the *Quoran* was first revealed on this day. The fast is ordained in a magnificent passage of the *Quoran*.

Ramzan—The festival marks the end of Ramzan, the month of fasting.

Buddhist Festivals— *Ashada Purnima*—is in commemoration of the first sermon of Buddha attaining Mahaparinirvan in Kosi.

Full Moon of Vaisakha—is the sacred day in the Buddhist calendar. On this day, under the spreading emerald canopy of the Sal tree in the gardens of Lumbini in Nepal, was born of the queen Maya, Prince Siddhartha, the Buddha to be. It was on another Vaisakhi Purnima that Buddha attained "Bodhi" or enlightenment under a Bodhi tree at Gaya. On the third Vaisakhi Purnima, eighty years after the first, Buddha attained Mahaparinirvan in Kosi.

Secular Holidays in India— *Pongal*—3-day harvest festival and one of the biggest events in the States of Madras, Mysore and Andhra Pradesh. *Republic Day*—marks the inauguration of the Republic of India (26th Jan.). *Independence Day*—anniversary of India's independence (15th August). *Onam*—Harvest festival of Kerala and a day of revelry and merriment, fun and frolic with much feasting and dancing. *Gandhi Jayanti*—Birth anniversary of Mahatma Gandhi (Oct. 2).

Army Day (Jan. 15), *Martyrs' Day* (Jan. 30), *Jalianwalabagh Day* (April 13), *Solidarity Day* (Oct. 20), *Remembrance Day* (Nov. 11), *Children's Day* (Nov. 14), *Navy Day* (Dec. 21).

ASTRONOMICAL DATA

Solar System consists of one star (sun), nine planets and all other satellites (moons), several thousand minor planets (also called *asteroids*) and equally large number of comets. The centre of the solar system is the sun, our earth being one of the planets revolving round it.

Planet—is a large solid body that revolves round the sun or another star. Earth is one of the planets. There are nine such planets, such as mercury, venus, earth, mars, jupiter, saturn, uranus, neptune and pluto.

PLANET TABLE

	Average distance from sun (in miles)	One revolution around sun	Diameter (in miles)
Mercury	... 36,000,000	88 days	3,000
Venus	... 67,200,000	224½ days	7,650
Earth	... 92,900,000	365½ days	7,927
Mars	... 141,500,000	687 days	4,200
Jupiter	... 483,300,000	4,332 days	88,700
Saturn	... 886,100,000	10,759 days	75,000
Uranus	... 1,782,800,000	30,687 days	30,900
Neptune	... 2,793,500,000	60,127 days	33,000
Pluto	... 3,666,000,000	90,400 days	3,600

Sun—Our sun is a star and is the centre of the solar system and the closest star to the earth. The sun is too hot to be solid. It is a huge ball of gases that are so hot that they give off light. It is the bright body we see in the sky. It is this star which gives the earth light and heat. By the force of gravitational attraction, the sun keeps the planets in their regular orbits and pulls them through space at the rate of about 12 miles per second. Great storms occur in whiten hot gases of the sun just as storms occur in the atmosphere surrounding the earth. These solar storms are called *sunspots*.

The diameter of the sun is 864,000 miles. It revolves round its axis once in 25 days 9 hours. Its surface temperature is between 5,500° and 6,000°C, and its interior temperature 1-14 million°C.

Star—is a large sphere of glowing gas in space. Our sun is a star. Other stars are so far away that they are seen only as points of light in the night sky. Stars are very large and are intensely hot, deriving their energy from nuclear reactions going on in their interiors.

Galaxy—All the stars we see in the sky (with a very few exceptions), are part of a galaxy—a system of roughly 30 billion stars. A cursory glance in the sky is sufficient to show that fainter stars are concentrated towards the region of the Milky Way. It is now known that this system, called the Galaxy, is about 108,000 light years in diameter and has thickness less than 5,000 light years. Milky Way is the centre plane of the system.

Asteroids—are actually little planets. They travel round the sun just as big planets do. The paths of most of them are between the paths of Jupiter and Mars. More than 1,500 asteroids have been recognised and many more are believed to exist. Ceres with its diameter of about 480 miles is the largest asteroid.

Constellations—A group of stars that, as seen from the earth, seemed to ancient people to form pictures in the sky. The constellations appear in different parts of the sky at different times of the year. The names they gave to the constellations tell us what pictures they saw. Among them are Taurus (the Bull), Canis major (the Big Dog), Pegasus (the Winged Horse), Draco (the Dragon), Ursa major (the Big Bear) and Ursa minor (the Little Bear).

Meteors—are pieces of matter which fall to the earth out of space. They plunge into earth's atmosphere at great speed and become incandescent from the resultant friction, so that they are seen in the sky as fireballs or 'shooting stars'.

Meteorites—Any mass of metal or stone that has fallen on earth from outer space. Meteorites range in size from pebbles to gigantic masses weighing over 100,000 pounds.

Auroras—The 'northern lights' (*Aurora Borealis*) as well as the 'southern lights' (*Aurora Australis*) are upper-atmospheric phenomena but of astronomical origin. *Aurora Borealis* is a broad display of rather faint light in the northern skies at night. This Aurora appears in a wide variety of forms. Sometimes it is seen as a quiet glow, almost fog-like in character; sometimes as vertical streamers in which there may be considerable motion; sometimes as a luminous series of expanding arcs. These are of many colours. The *Aurora Australis* is a similar phenomenon seen in southern skies. Auroras are most vividly and most frequently seen at about 20 degrees from the magnetic poles, along the northern coast of the North American continent and the eastern part of the northern coast of Europe. They have been seen as far south as Key West and as far north as Australia and New Zealand, but such occasions are rare.

Comets—are heavenly bodies of luminous and nebulous appearance, that move round the sun in an orbit which is normally an elongated ellipse. Ordinarily, a comet has a head of cloudy brightness. Sweeping from the head curves the tail which extends sometimes to great or small lengths. A few comets travel in hyperbolic orbits, never returning, but most comets return over a period of years. The most famous is the Halley's Comet which can be seen every seventy years. Comets are enormous snow-balls of frozen gases containing very little solid material.

Satellites—are heavenly bodies revolving around larger heavenly bodies. Planet Saturn has nine known satellites. The earth has one, the moon. A number of artificial satellites have been placed in the orbit around the earth by means of rockets fired into space. These satellites carry instruments and cameras which collect important information, not only about space but about our atmosphere and the earth's surface as well.

Earth—is called a planet because it circles the sun. In shape, it is almost a sphere, being slightly flattened at the poles, as well as being rather pear-shaped, with the pear's stalk at the North Pole. The whole

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surface of the earth is blanketed by a layer known as atmosphere. Its diameter from Pole to Pole is 7,900 miles and at the Equator 7,929 miles. Its distance from the sun is about 93,000,000 miles. The earth has two movements within the solar system : (1) it revolves round the sun in an elliptical path, making a complete revolution in 365 days 5 hrs. 49 m. and 12 s., its speed on its path being $18\frac{1}{2}$ miles per second or 66,600 miles per hour. The travelling of the earth around the sun helps to cause season. (2) it spins on its polar axis at the rate of once in 24 hours.

Moon—is the satellite of the earth. It is nearer to the earth than any other of the stars or planets. It has a diameter of 2,160 miles, and its average distance from the earth's surface is 238,900 miles. The moon revolves round the earth once in 27 days 7 hrs. 43 min. Its speed on its orbit is 2,300 miles per hour. Because the moon is so near the Earth, it exercises a gravitational pull on the earth's seas and oceans, and this gives rise to the earth's tides.

The moon appears to shine because the sun is shining on it. The moon does not give off light of its own as the sun does. It would not be bright, if the sun does not shine on it.

Atmosphere—The atmosphere is composed of air which surrounds or envelopes the whole earth. It is sometimes likened to a great sea of gases, at the bottom of which we live. This air which surrounds the globe, affects the light that occurs to us from heavenly bodies. It refracts light rays that enter into it. Due to this refraction, we see the sun and the moon before they rise and after they set. The 'twinkling' of the stars is caused by convection currents in the air, that have rapidly changed refractive effect on the light from the stars. *Twilight* is produced by the diffusion in the atmosphere of light from the sun, when it is below the horizon. Chemically, the atmosphere is composed of nitrogen, oxygen, and extremely minor amounts of argon, neon, helium, hydrogen and carbon dioxide.

GEOGRAPHICAL INFORMATION

CONTINENTS

	Area (sq. m.)		Area (sq. m.)
Africa	... 11,696,572	Europe	... 3,525,755
Asia	... 17,461,583	Antarctica	... 5,100,000
Oceania	... 3,303,002	North America	... 9,357,026
South America	... 6,868,098		

OCEANS AND SEAS

	Area (sq. m.)	Greatest Depth (ft.)
Oceans		
Pacific	... 63,801,668	37,782 (Mindanao Trench)
Atlantic	... 31,839,306	30,246 (Poerto Rico Trench)

Oceans	Area (sq. m.)	Greatest Depth (ft.)
Indian	... 28,356,276	26,400 (Diamantine)
Arctic	... 5,440,197	17,850
Seas		
Malaya Sea	... 3,144,053	21,342 (Kei Trench)
Caribbean Sea	... 1,063,340	23,748
Mediterranean Sea	... 966,757	14,435
South China Sea	... 895,400	18,010
Bering Sea	... 875,753	13,422
Gulf of Mexico	... 595,760	12,744
Sea of Okhotsk	... 589,807	11,154
East China Sea	... 482,317	10,500
Yellow Sea	... 480,000	348
Hudson Bay	... 475,762	1,500
Sea of Japan	... 389,074	13,241
Andaman Sea	... 307,954	12,392

RIVERS

Location	Length (m)	Location	Length (m)
Nile	Africa ... 4,160	Missouri	N. America 2,475
Amazon	Brazil ... 3,900	Mississippi	N. America 2,470
Yangtze	China ... 3,400	Parana	Brazil-Argentina ... 2,450
Mekong	Vietnam ... 2,800		S. America 2,300
Congo	Africa ... 2,718	La Plata	Australia ... 2,300
Obe	USSR ... 2,700	Murray	U.S.S.R. 2,290
Amur	USSR ... 2,700	Volga	N. America 1,979
Lena	Europe ... 2,680	Yukon	N. America 1,945
Mackenzie	N. America 2,635	St. Lawrence	N. America 1,800
Niger	Africa ... 2,600	Rio Grande	
Yenisei	Siberia ... 2,550		

LAKES

	Area (sq. m.)		Area (sq. m.)
Caspian Sea (U.S.S.R. —Iran)	... 169,300	Tanganyika (Africa)	... 12,700
Superior (N. America)	... 31,820	Great Bear (N. America)	... 12,275
Victoria-Nyanza (Africa)	... 26,828	Nyasa (Africa)	... 11,430
Aral (U.S.S.R.)	... 25,300	Great Slave (N. America)	... 10,980
Huron (N. America)	... 23,010	Erie (N. America)	... 9,930
Michigan (N. America)	... 22,400	Winnipeg (N. America)	... 9,464
Baikal (U.S.S.R.)	... 13,300	Ontario (N. America)	... 7,520
		Chad (N. Africa)	... 6,300

MOUNTAIN PEAKS

<i>Peak</i>	<i>Country</i>	<i>Height (in ft.)</i>	<i>Peak</i>	<i>Country</i>	<i>Height (in ft.)</i>
Everest	Nepal-Tibet	29,028	Gasherbrum	India	26,470
Godwin-Austen (K ²)	India	28,250	Gosainthan	Tibet	26,291
Kanchanjungha	Nepal-Sikkim	28,146	Disteghil	India	25,868
Lhotse I	Nepal-Tibet	27,923	Himalchuli	Nepal	25,801
Makalu I	Nepal-Tibet	27,824	Nuptse	Nepal-Tibet	25,726
Lhotse II	Nepal-Tibet	27,560	Masherbrum	India	25,660
Dhaulagiri	Nepal	26,811	Nanda Devi	India	25,645
Annapurna I	Nepal-India	26,926	Chomo Lonzo	Nepal-Tibet	25,640
Cho 'Oyu'	Nepal-Sikkim	26,750	Rakaposhi	India	25,550
Manaslu I	Nepal	26,760	Kamet	India-Tibet	25,447
Nanga Parvat	India	26,600	Tirich Mir	Afghanistan	25,426

MOUNTAIN PASSES

	<i>Height (ft.)</i>		<i>Height (ft.)</i>
Alpine (<i>Colorado, U.S.A.</i>)	13,550	Bolan (<i>Baluchistan</i>)	... 5,880
St. Bernard (<i>Swiss Alps</i>)	... 8,100	Brenner (<i>Austrian Alps</i>)	... 4,588
St. Gothard (<i>Swiss Alps</i>)	... 6,936	Shipka (<i>Bulgaria</i>)	... 4,300
Simplon (<i>Swiss Alps</i>)	... 6,595	Khyber (<i>Afghanistan</i>)	... 3,373

CAVES AND CAVERNS

Great Onyx Cave, (*Kentucky, U.S.A.*).
 Luray Cavern, (*Virginia, U.S.A.*).
 Shenandoah Caverns (*Virginia, U.S.A.*).
 Wind Cave (*Black Hills, S. Dakota, U.S.A.*).
 Cyracuse (*Sicily, Italy*).
 Indian Chamber Cave (*N.S.W., Australia*).
 Carlsbad Caverns (*New Mexico, U.S.A.*). *Probably the largest in the world.*

VOLCANOES

<i>Active</i>	<i>Height (ft.)</i>	<i>Active</i>	<i>Height (ft.)</i>
Guallatiri (<i>Chile</i>)	... 19,882	Wrangell (<i>Alaska</i>)	... 14,005
Laskar (<i>Chile</i>)	... 19,652	Tajumulco (<i>Guatemala</i>)	... 13,812
Cotopaxi (<i>Equador</i>)	... 19,347	Mauna Loa (<i>Hawaii</i>)	... 13,680
Sangay (<i>Equador</i>)	... 17,749	Cameroons (<i>Nigeria</i>)	... 13,350
Tungurahua (<i>Equador</i>)	... 16,512	Tacana (<i>Guatemala</i>)	... 13,333
Catacachi (<i>Equador</i>)	... 16,197	Erebus (<i>Antarctica</i>)	... 13,200
Purace (<i>Colombia</i>)	... 15,604	Etna (<i>Sicily, Italy</i>)	... 10,705
Klyuchevskaya (<i>U.S.S.R.</i>)	15,584	Nyiragongo (<i>Congo</i>)	... 11,560

<i>Quiescent</i>	<i>Height (ft.)</i>	<i>Extinct</i>	<i>Height (ft.)</i>
Llullaillaco (<i>Chile</i>)	22,146	Aconcagua (<i>Argentina</i>)	... 22,834
Kilimanjaro (<i>Tanganyika</i>)	19,340	Chimborazo (<i>Ecuador</i>)	... 20,561
Misti (<i>Peru</i>)	... 19,031	Demavend (<i>Iran</i>)	... 18,934
Pichincha (<i>Ecuador</i>)	... 15,712	Antisana (<i>Ecuador</i>)	... 18,850
Fujiyama (<i>Japan</i>)	... 12,388	Orizaba (<i>Mexico</i>)	... 18,701
Kronotskaya (<i>U.S.S.R.</i>)	... 11,575	Elbruz (<i>U.S.S.R.</i>)	... 18,481
Lassen (<i>U.S.A.</i>)	... 10,547	Popocatepetl (<i>Mexico</i>)	... 17,887
		Karisimbi (<i>Congo</i>)	... 14,787
		Vesuvias (<i>Italy</i>)	... 4,190

ISLANDS

<i>Ocean</i>	<i>Area</i> (sq. m.)	<i>Ocean</i>	<i>Area</i> (sq. m.)
Greenland Arctic	... 840,000	Victoria Arctic	... 80,450
New Guinea Pacific	... 347,450	Celebes Pacific	... 73,160
Borneo Pacific	... 307,000	Prince Albert Arctic	... 60,000
Baffin Arctic	... 236,000	South Island Pacific	... 58,500
Madagascar Indian	... 227,737	Java Pacific	... 48,763
Sumatra Indian	... 161,012	Luzon Pacific	... 46,636
Honshu Pacific	... 88,919	North Island Pacific	... 44,281
Great Britain Atlantic	... 88,745	Cuba Atlantic	... 44,206
Ellesmere Arctic	... 82,119	Newfoundland Atlantic	... 42,750

WATERFALLS

<i>By height</i>	<i>Height (ft.)</i>	<i>By volume of water</i>	<i>Thousands of gallons per second</i>
(Single leap)			
Angel (<i>Venezuela</i>)	... 2,648	Guaira (<i>Brazil</i>)	... 2,900
Ribbon (<i>California, U.S.A.</i>)	1,612	Khone (<i>Laos</i>)	... 2,500
King George VI (<i>Br. Guiana</i>)	1,600	Niagara (<i>U.S.-Canada</i>)	... 1,300
Upper Yosemite (<i>U.S.A.</i>)	... 1,430	Paulo Affonso (<i>Brazil</i>)	... 600
Tugela (<i>Natal, S. Africa</i>)	... 1,350	Uruburunga (<i>Brazil</i>)	... 600
Gavarnie (<i>Pyrenees, France</i>)	1,385	Iguassu (<i>Argentina</i>)	... 330
Wollomombi (<i>N.S.W., Aus.</i>)	1,100	Maribondo (<i>Brazil</i>)	... 330
Takakkaw (<i>Br. Colombia</i>)	1,000	Victoria (<i>Rhodesia</i>)	... 240
Staubbach (<i>Switzerland</i>)	... 980	Grand (<i>Labrador, Canada</i>)	220
Gersoppa (<i>Mysore</i>)	... 960	Kaietur (<i>Br. Guiana</i>)	... 146

DESERTS

	<i>Area</i> (sq. m.)		<i>Area</i> (sq. m.)
Sahara (N. Africa)	... 3,500,000	Arabian (Arabia)	... 500,000
Libyan (N. Africa)	... 650,000	Gobi (Mongolia)	... 400,000
Great Australian (W. Australia)	... 600,000	Rub'al Khali (part of Arabian Desert)	... 250,000

	Area (sq. m.)		Area (sq. m.)
Kalahari (Bechuanaland)*	200,000	Arunta (part of Australian Desert) ...	120,000
Great Sandy (part of Australian Desert) ...	160,000	Kara Kum (S. W. Turkistan, U.S.S.R.) ...	105,000
Great Victoria (part of Australian Desert) ...	125,000	Nubian (part of Sahara) ...	100,000
Syrian (part of Arabian Desert) ...	125,000	Thar (N. W. India) ...	100,000
Takla Makan (S. Sinkiang, China) ...	125,000	Kizil Kum (Central Turkistan, U.S.S.R.) ...	90,000

WORLD WEATHER RECORDS

<i>Lowest temperature</i> :—126.9°F at Vostok (Antarctica); Aug. 24, 1960.	<i>Maximum rainfall (24 hours)</i> —73.62 in. on Mar. 16, 1952, at Cilaos, La Reunion in Indian Ocean.
<i>Lowest annual average temperature</i> :—72°F at Pole of Cold (Antarctica).	<i>Maximum rainfall (one month)</i> —366.14 in. at Cherrapunji (Assam), July, 1861.
<i>Highest temperature</i> :—136.4°F at San Luis Potosi (Mexico); Aug. 11, 1933.	<i>Maximum rainfall (one year)</i> —1,041.78 in. at Cherrapunji (Assam), from Aug. 1, 1860 to July 31, 1861.
<i>Highest annual average temperature</i> :—88°F at Lugh Ganane (Somalia).	<i>Highest annual average (rainfall)</i> —471.68 in. at Mt. Waialeale (Hawaii).
<i>Average world rainfall</i> —33 inches per year.	

GEOGRAPHICAL SURNAMES

<i>Island of Pearls</i> —Bahrein (Persian Gulf).	<i>Sugar Bowl of the World</i> —Cuba.
<i>World's loneliest island</i> —Tristan De Cunha (Mid-Atlantic).	<i>Windy City</i> —Chicago.
<i>Roof of the World</i> —Pamir.	<i>Venice of the North</i> —Stockholm.
<i>Holy Land</i> —Palestine.	<i>Forbidden City</i> —Lhasa.
<i>Island of Cloves</i> —Zanzibar.	<i>Land of Cakes</i> —Scotland.
<i>Land of White Elephant</i> —Siam.	<i>Land of Five Rivers</i> —Punjab.
<i>Empire City</i> —New York.	<i>Granite City</i> —Aberdeen.
<i>Pillars of Hercules</i> —Strait of Gibraltar.	<i>Eternal City</i> —Rome.
<i>Key of the Mediterranean</i> —Gibraltar.	<i>Gift of the Nile</i> —Egypt.
<i>Rose-pink City</i> —Jaipur.	<i>Land of Midnight Sun</i> —Norway.
<i>Whiteman's Grave</i> —Guinea coast of Africa.	<i>Land of Morning Calm</i> —Korea.
	<i>Land of Rising Sun</i> —Japan.
	<i>Hermit Kingdom</i> —Korea.
	<i>Play-ground of Europe</i> —Switzerland.
	<i>City of Seven Hills</i> —Rome.

<i>Queen of the Adriatic</i> —Venice.	<i>Gate of Tears</i> —Strait of Bab-el-Mandeb.
<i>Gateway of India</i> —Bombay.	<i>Pearl of the Antilles</i> —Cuba.
<i>Garden of India</i> —Bangalore.	<i>The Corridor</i> —A strip of land in Poland, separating Germany from East Prussia.
<i>City of Palaces</i> —Calcutta.	<i>The Down Under</i> —Australia.
<i>City of Skyscrapers</i> —New York.	<i>Herring Pond</i> —Atlantic Ocean.
<i>Dark Continent</i> —Africa.	<i>Great White Way</i> —Broadway (New York).
<i>Emerald Isle</i> —Ireland.	<i>City of Dreaming Spires</i> —Oxford.
<i>Land of Maple</i> —Canada.	<i>Garden of England</i> —Kent (Eng.).
<i>Bengal's Sorrow</i> —Damodar River.	<i>Britain of the South</i> —New Zealand.
<i>Never Never land</i> —Vast prairies of northern Australia.	<i>Blue Mountains</i> —Nilgiri Hills.
<i>Land of Golden Fleece</i> —Australia.	<i>Celestial City</i> —Peking.
<i>Cockpit of Europe</i> —Belgium.	<i>City of Golden Gate</i> —San Francisco.
<i>Land of Thousand Lakes</i> —Finland.	
<i>City of Magnificent Distances</i> —Washington D.C.	
<i>China's Sorrow</i> —Hwang-Ho.	

GEOGRAPHICAL RECORD-BREAKERS

<i>Highest Mountain System</i>	... Himalayas.
<i>Longest Mountain System</i>	... Andes.
<i>Highest Mountain Peak</i>	... Mt. Everest (Himalayas), 29,028 ft.
<i>Highest Plateau</i> ...	... Tibet.
<i>Longest River</i> ...	... Nile, 4,160 miles.
<i>Largest River (in volume)</i>	... Amazon.
<i>Largest River Basin</i> ...	... Basin of Amazon, 2,702,200 sq. m.
<i>Largest Inland Lake or Sea</i>	... Caspian Sea (USSR—Iran), 169,300 sq. m.
<i>Largest Fresh-water Lake</i>	... Superior (U.S.A.), 31,820 sq. m.
<i>Deepest Lake</i> ...	... Baikal (Siberia), average depth : nearly 2,300 ft.
<i>Highest Navigated Lake</i>	... Titicaca (Bolivia), 12,507 ft. above sea level.
<i>Largest Artificial Lake</i> ...	... Lake Mead at Boulder Dam (U.S.A.).
<i>Largest Continent</i> ...	... Asia, 17,461,583 sq. m.
<i>Biggest Ocean</i> ...	... Pacific, 66,030,124 sq. m.
<i>Largest N. to S. Stretch of Land</i>	... America : N. to S. it extends from the Arctic to the Antarctic Ocean.
<i>Longest Straits</i> ...	... Malacca Straits between Malaya and Sumatra, 485 m. long.
<i>Largest Gulf</i> ...	... Gulf of Mexico, with a shoreline of 3,100 m.
<i>Largest Inland Sea</i> ...	... Mediterranean Sea, 966,757 sq. m.
<i>Largest Peninsula</i> ...	... Arabia, 1,250,000 sq. m.

<i>Biggest Desert</i>	...	...	Sahara (N. Africa), 3,200 miles from east to west and 3,50,000 sq. miles
<i>Deepest Canyon</i>	...	...	Hell's Canyon (U.S.A.), 7,900 ft. deep.
<i>Deepest Cave</i>	...	...	Gouffre Berger (France), 3,723 ft. deep.
<i>Highest Capital City</i>	...	...	La Paz (Bolivia), about 11,916 ft. above sea level.
<i>Highest Town</i>	...	...	Wenchuan (Tibet), 16,732 ft. above sea level.
<i>Largest Island</i>	...	...	Greenland. 840,000 sq. miles.
<i>Largest Population</i>	...	...	In China (mainland), 755 million in June, 1964.
<i>Most Populous City</i>	...	...	Tokyo, 10,393,667 in June, 1963.
<i>Densest Population</i>	...	...	Principality of Monaco (38,578 per sq. m.).
<i>Hottest Regions</i>	...	...	North-West Sahara, Azizia (Libya), Death Valley (California) and Thar Desert of North-West India.
<i>Coldest Region</i>	...	...	Verkhoyansk in N.-W. Siberia, where temperature is 94°C. below zero.
<i>Largest Country</i>	...	...	U.S.S.R., 8,649,550 sq. miles.
<i>Smallest Country</i>	...	...	Vatican City (108.7 acres).
<i>Most Northerly Town</i>	...	...	Hammerfest (Norway), 275 miles north of Arctic circles.
<i>Rainiest Place</i>	...	...	Mt. Waialeale (Hawaii), annual average : 471 in.
<i>Highest Active Volcano</i>	...	...	Guallatiri (Chile), 19,882 ft.
<i>Highest Dormant Volcano</i>	...	...	Llullaillaco (Chile), 22,146 ft.
<i>Smallest Continent</i>	...	...	Australia.
<i>Saltiest Sea</i>	...	...	Dead Sea.
<i>Largest Delta</i>	...	...	Sundarban Delta, 8,000 sq. miles.
<i>Highest Waterfall (single leap)</i>	...	...	Angel (Venezuela), 2,648 ft.
<i>Biggest Waterfall</i>	...	...	Guaira (Brazil), average annual flow : 470,000 cu. ft. per sec.
<i>Largest Gorge</i>	...	...	Grand Canyon (Arizona, U.S.A.), 280 m. long and at some places, more than one mile deep.
<i>Largest Atoll</i>	...	...	Kwajalein, Marshall Islands (Central Pacific). Its 176 m. long coral reef encloses lagoon of 1,100 sq. m.
<i>Longest Reef</i>	...	...	Great Barrier Reef (Australia), 1,260 miles long.
<i>Tallest Geyser</i>	...	...	'Giant' in the Yellowstone National Park (U.S.A.).

<i>Largest Archipelago</i>	...	...	Indonesia, comprising about 3,000 islands.
<i>Biggest Cave</i>	...	...	Big Room of Carlsbad Caverns, 1,320 ft. deep, 4,270 ft. long and 656 ft. wide.
<i>Lowest body of water</i>	...	...	Dead Sea.
<i>Deepest place in the ocean</i>	...	...	Off the Island of Mindanao, Philippines, where sounding of 37,782 ft. has been reached.

POLAR EXPEDITIONS

Arctic

<i>Year</i>	<i>Explorer</i>	<i>No.</i>	<i>Latitude</i>
1587 ...	John Davis (G.B.)	72°	12'
1596 ...	Willem Barents & Jacob van Heemskerck (Holland)	79°	49'
1609 ...	Henry Hudson (G.B.)	80°	23'
1616 ...	William Baffin & Robert Bylot (G.B.)	...	...
1728 ...	Vitus Bering (Russia)	...	...
1771 ...	Samuel Hearne (U.S.A.)	...	...
1773 ...	Capt. C. J. Phipps (G.B.)	80°	37'
1778 ...	James Cook (G.B.)	...	...
1789 ...	Alexander Mackenzie (G.B.)	...	...
1806 ...	William Scoresby (G. B.)	81°	12'42"
1820-23	Ferdinand von Wrangel (Russia)	...	45°
1827 ...	William E. Parry (G. B.)	82°	45'03"
1854 ...	E. J. De Haven & E. K. Kane (U.S.A.)	80°	11'
1871 ...	Capt. Hall (U.S.A.)	82°	20'
1875 ...	Capt. Nares (G. B.)	83°	24'
1875 ...	Lt. Pelham Aldrich & P.O.A. Ayles (G. B.)	82°	48'
1876 ...	Cdr. Albert Markham & Lt. A. A. Chase Parr (G. B.)	83°	20'26"
1882 ...	Lt. A. W. Greely (U.S.A.)	83°	27'
1892 ...	Cdr. Robert E. Peary (U.S.A.)	83°	27'
1895 ...	Fridtjof Nansen & Lt. Frederik Johansen (Norway)	86°	13'06"
1900 ...	Duke d' Abruzzi (Italy)	86°	17'
1900 ...	Capt. Umberto Cagni (Italy) & others	86°	34'49"
1902 ...	Cdr. Peary (U.S.A.)	84°	17'
1904 ...	Zeigler Polar Expedition (U.S.A.)	82°	6'
1906 ...	Cdr. Peary (U.S.A.)	87°	6'
1909 ...	Cdr. Peary (U.S.A.) & others	90°	(Pole) ...
1926 ...	Lt.-Cdr. R. E. Byrd and F. Bennett (U.S.A.)—by <i>aeroplane</i> .	90°	(Pole) ...
1926 ...	Amundsen-Ellsworth-Gen. U. Nobile—by <i>airship</i>	90°	(Pole) ...
1928 ...	Gen. U. Nobile (Italy)—by <i>airship</i>	90°	(Pole) ...

<i>Year</i>	<i>Explorer</i>	<i>No.</i>	<i>Latitude</i>
1937 ...	Pavel Golovin (U.S.S.R.)—by <i>aeroplane</i>	90°	(Pole) ...
1937 ...	Otto Y. Schmidt and four others (U.S.S.R.)—by <i>aeroplane</i>	90°	(Pole) ...
1952 ...	Lt.-Col. Benedict (U.S.A.)	90°	(Pole) ...
1958 ...	U.S. nuclear submarine <i>Nautilus</i> passed under the Pole (Aug. 3) ...		
1958 ...	U.S. nuclear submarine <i>Skate</i> became the second ship to make underwater crossing of the North Pole (August 12)		
1960 ...	U.S. nuclear submarine <i>Sargo</i> travelled under the Arctic ice-pack to and around the North Pole (Feb.) ...		
1960 ...	U.S. nuclear submarine <i>Sea Dragon</i> made the first east-west underwater transit through the N. W. Passage (August). ...		

Antarctic

<i>Year</i>	<i>Explorer</i>	<i>No.</i>	<i>Latitude</i>
1774 ...	Capt. James Cook (G.B.)	71°	10'
1823 ...	Capt. James Weddell (G.B.)	74°	15'
1842 ...	Capt. James C. Ross (G.B.)	78°	09'30"
1900 ...	C. E. Borchgrevink (Norway)	78°	50'
1902 ...	Cdr. Robert F. Scott (G.B.)	82°	16'33"
1909 ...	Lieut. E. H. Shackleton (G. B.)	88°	23'
1911 ...	Roald Amundsen (Norway)	90°	(Pole) ...
1912 ...	Capt. Robert F. Scott (G.B.)	90°	(Pole) ...
1929 ...	Cdr. R. E. Byrd (U.S.A.)—by <i>aeroplane</i>	90°	(Pole) ...
1935 ...	L. Ellsworth (U.S.A.)—by <i>aeroplane</i>	76°-79°	58'
1947 ...	Rear-Adml. Byrd (U.S.A.)—by <i>airship</i>	90°	(Pole) ...
1956 ...	Rear-Adml. George J. Dufek (U.S.A.) —by <i>aeroplane</i> ...	90°	(Pole) ...
1958 ...	Sir Edmund Hillary (New Zealand)	90°	(Pole) ...
1958 ...	Dr. Vivian Fuchs (G.B.)	90°	(Pole) ...

FIRST ASCENTS OF MOUNTAIN PEAKS

<i>Mont. Blanc</i> (Fr.-Italy), by M. G. Paccard & J. Balmat, 1786.	<i>Mt. Cook</i> (New Zealand) by W. S. Green, 1882.
<i>Jungfrau</i> (Switzerland), by R. & H. Meyer, 1811.	<i>Kilimanjaro</i> (Tanganyika) by Myer, 1887.
<i>Matterhorn</i> (Switzerland) by E. Whymper, 1865.	<i>Aconcagua</i> (Argentina) by M. Zurbriggen, 1897.
<i>Elburz</i> (U.S.S.R.) by D. W. Freshfield, A. W. Moore, & C. C. Tucker, 1868.	<i>Mt. St. Elias</i> (Alaska) by Duke of Abruzzi, 1897.
<i>Chimborazo</i> (Ecuador) by E. Whymper, 1880.	<i>Mt. Kenya</i> (Kenya) by H. J. Macindor, 1899.

- Ruwenzori* (Central N. Africa) by *K² or Godwin Austen* (Kashmir, India), by Italian Exp., July 31, 1954.
- Duke of Abruzzi*, 1906.
- Mt. McKinley* (Alaska) by *Parker-Browne Expedition*.
- Mt. Logan* (Alaska) by *H. McCarthy*, 1925.
- Illampu* (Bolivia) by *German-Austrian Expedition*.
- Annapurna I* (Nepal), by *Maurice Herzog* (French), June 3, 1950.
- Everest* (Nepal-Tibet) by *British Expedition*, May 29, 1953.
- Nanga Parvat* (Kashmir, India), by *Austro-German Exp.*, July 4, 1953.
- Mt. Nunkun* (Kashmir, India), by *French Exp.*, Aug. 28, 1953.
- Mt. Cho-Oyu* (Nepal-Sikkim), by *Austrian Exp.*, Oct. 19, 1954.
- Makalu* (Nepal-Tibet), by *French Exp.*, May, 1955.
- Kanchanjunga* (Nepal-Sikkim), by *British Exp.*, May 25, 1955.
- Manaslu* (Nepal), by *Japanese Expedition*, May, 1956.
- Lhotse I* (Nepal-Tibet), by *Swiss Expedition*, May 18, 1956.
- Dhaulgiri* (Nepal), by *Swiss Expedition*, May 13, 1960.
- Nilgiri* (India), by *Indian Team*, Oct., 1962.

GENERAL INFORMATION

SEVEN WONDERS OF THE ANCIENT WORLD

Pyramids of Egypt— Built from 3000 B.C. to 1800 B.C., the pyramids were the monumental tombs of Egyptian pharaohs. The oldest is at Sakkara. The biggest are at Gizeh, near Cairo. The great pyramid of Cheops covers nearly 13 acres and originally was 481 feet high and 756 feet square at the base; its size has been reduced because the facing stone has been removed, making its present height 450 feet.

Hanging Gardens of Babylon— Nebuchadnezzar, who destroyed Solomon's Temple, was said to have built gardens on terraces at Babylon for his queen, about 600 B.C. According to the legend there were five terraces, each 50 feet above the other, embellished with trees and flowers. No trace remains.

Phidias' Statue of Zeus— The statue of Zeus at Olympia, province of Elias, built of marble and decorated with ivory and beaten gold, was made by Phidias after 432 B.C. Destroyed in the wars.

Temple at Ephesus— The temple of Artemis (Diana) at Ephesus, south of Smyrna, was built about 5 B.C. by the Ionian cities and became a famous shrine. It was 425 by 225 feet, had 127 columns of Parian marble each 60 feet high. It was set on fire by Herostratus in 356 A.D. to gain personal notoriety. Praxiteles built its new altar. It was here that Paul the Apostle challenged pagan worship and enraged the crowd. The temple was despoiled by Nero and destroyed by Alaric the Goth.

Tomb of Mausolus— When Mausolus, King of Caris, Asia Minor, died, his widow built a great marble tomb at Halicarnassus, about 325 B.C. The word mausoleum derives from this. The tomb was broken

by an earthquake. In the 19th century fragments reached the British Museum.

Colossus of Rhodes— A bronze statue of Apollo, 100 to 115 ft. tall, erected about 280 B.C. at harbour of Rhodes seaport on Greek island of Rhodes in Aegean Sea, south-west of Asia Minor. Thrown down by earthquake about 224 B.C., it lay prone untill 656 A.D., when Saracens cut it up and carted it off. It was seen by the Elder Pliny, 1st century A.D. A project to reproduce it was agitated at Rhodes, 1961.

Pharos at Alexandria— A lighthouse built on the island of Pharos outside the port of Alexandria became famous under that name. Ptolemy Philadelphus built it about 200 B.C. and inscribed it "King Ptolemy to the gods, the saviors, for the benefit of sailors." A fire was kept burning on top. It was partly destroyed in 400 A.D., finally levelled by an earthquake in 1375 A.D.

TOP CITIES OF THE WORLD

	<i>Population</i>		<i>Population</i>
Tokyo	... 10,393,667	Moscow	... 5,032,000
Great London	... 8,171,902	Peking	... 4,140,000
New York	... 7,781,984	Rio De Janeiro	... 3,288,000
Mexico City	... 4,829,402	Berlin	... 3,402,700
Buenos Aires	... 4,500,000	Hong Kong	... 3,178,000
Bombay (Greater)	... 4,152,056	Manila	... 3,100,000
Peking	... 4,010,000	Tientsin	... 3,100,000
Sao Paulo	... 3,850,000	Paris	... 3,075,678
Chicago	... 3,550,400	Calcutta	... 2,927,289
Cairo	... 3,460,000	Osaka	... 2,899,000
Djakarta	... 3,317,562	Los Angeles	... 2,450,068
Leningrad	... 3,300,000	Delhi	... 2,359,408
Shanghai	... 6,204,417		

LONGEST RAILWAY PLATFORMS

	<i>feet</i>		<i>feet</i>
Storvik (Sweden)	... 2,470	York (England)	... 1,704
Sone (India)	... 2,415	Cambridge (England)	... 1,629
Bulaway (Rhodesia)	... 2,415	Edinburgh (Scotland)	... 1,608
New Lucknow (India)	... 2,250	Aberdeen (Scotland)	... 1,596
Vijayawada (India)	... 2,210	Tiruchirapalli (India)	... 1,546
Victoria and Exchange (Manchester, England)	2,194	Ranaghat (India)	... 1,522
Jhansi (India)	... 2,025	Crewe (England)	... 1,509
Kotri (N.W.R., Pakistan)	... 1,896	Dakor (India)	... 1,470
Mandalay (Burma)	... 1,788	Victoria (London, England)	1,430
Bournemouth (England)	... 1,734	New Castle (England)	... 1,365
Perth (Scotland)	... 1,714	Bristol (England)	... 1,300

RAILWAY TUNNELS

	miles		miles
*East Finchley—Morden, (London) ...	17 $\frac{1}{4}$	Arlberg (Austria) ...	6 $\frac{1}{4}$
Simplon II (Switzerland-Italy) ...	12 $\frac{1}{4}$	Moffat (U.S.A.) ...	6
Apennine (Italy) ...	11 $\frac{1}{2}$	Shimizu (Japan) ...	6
St. Gothard (Switzerland) ...	9 $\frac{3}{4}$	Rimutaka (New Zealand) ...	5 $\frac{1}{2}$
Loetschberg (Switzerland) ...	9	Grenchenberg (Switzerland) ...	5 $\frac{1}{4}$
Mont Cenis (Italy) ...	8 $\frac{1}{2}$	Ricken (Switzerland) ...	5 $\frac{1}{4}$
Cascade (U.S.A.) ...	7 $\frac{3}{4}$	Hohe Tauren (Austria) ...	5 $\frac{1}{4}$

LONGEST BRIDGES

	Length (ft.)		Length (ft.)
Verrazona-Narrows (New York) ...	13,700	Hardinge (E. Pakistan) ...	5,380
Lower Zambesi (Mozambique, Africa) ...	12,064	Victoria Jubilee (Canada) ...	5,320
Storrsstrom (Denmark) ...	10,500	Moerdijk (Netherlands) ...	4,700
Tay (Scotland) ...	10,290	Brahmaputra (India) ...	4,252
Sone (India) ...	10,052	Jacques Cartier (Canada) ...	3,890
Godavari (India) ...	8,880	Sydney Harbour (N.S.W., Australia) ...	3,770
Forth (Scotland) ...	8,290	Queensborough (U.S.A.) ...	3,720
Rio Salado (Argentina) ...	6,700	George Washington (U.S.A.) ...	3,500
Golden Gate (U.S.A.) ...	6,260	Brooklyn (U.S.A.) ...	3,450
Rio Dulce (Argentina) ...	5,860	Torun (Poland) ...	3,290
		Quebec (Canada) ...	3,239

LONGEST DAM

Hirakud (India) ... 15.8 miles

HIGHEST DAMS

	Height (ft.)		Height (ft.)
Nurek (U.S.S.R.) ...	978	Bhakra (Punjab, India) ...	740
Grand Dixence (Switzerland) ...	932	Oroville (U.S.A.) ...	735
Vaiont (Italy) ...	858	Hoover (U.S.A.) ...	726
Mauvoisin (Switzerland) ...	778	Glen Canyon (U.S.A.) ...	710

LARGEST DAMS†

	Volume in cubic yds.		Volume in cubic yds.
Fort Peck (U.S.A.) ...	125,628,000	Nurek (U.S.S.R.) ...	58,860,000
Oahe (U.S.A.) ...	92,000,000	Kiev (U.S.S.R.) ...	58,800,000
Oroville (U.S.A.) ...	78,000,000	Aswan (U.A.R.) ...	54,443,000
Mangla (Pakistan) ...	75,000,000	Fort Randall (U.S.A.) ...	50,200,000
Garrison (U.S.A.) ...	66,500,000	Grand Coulee** ...	10,585,000

* London 'underground' Railway Tunnel.

† Earthfil.

** Largest Concrete Dam.

GREATEST RESERVOIRS

<i>Volume (acre ft.)</i>		<i>Volume (acre ft.)</i>	
Kariba (Rhodesia) ...	149,000,000	Mangla (Pakistan) ...	45,000,000 ⁹⁸
Bratsk (U.S.S.R.) ...	145,000,000	Krasnoyarsk (U.S.S.R.) ...	59,400,000
Akosombo (Ghana) ...	120,000,000	Hoover (U.S.A.) ...	32,471,000
Manicouagan (Canada) ...	115,000,000	Glen Canyon (U.S.A.) ...	28,000,000
High Aswan (Egypt) ...	127,000,000	Volgograd (U.S.S.R.) ...	27,200,000
Portage Mountain (Canada) ...	62,000,000	Garrison (U.S.A.) ...	24,500,000

LONGEST SHIP CANALS

<i>miles</i>		<i>miles</i>	
St. Lawrence Seaway (U.S.A. —Canada) ...	189	Panama (U.S.A.) ...	50½
Gota (Sweden) ...	115	Elbe & Trave (Germany) ...	41
Suez (Egypt) ...	100.6	Manchester (England) ...	35½
Volga—Moscow (U.S.S.R.) ...	80	Welland (Canada) ...	27½
Kiel (Germany) ...	61	Princess Juliana (Netherlands) ...	20½
Volga—Don (U.S.S.R.) ...	60	Amsterdam (Netherlands) ...	16½

NOTABLE TELESCOPES

(Location and diameter in inches)

REFRACTORS

Yerks Obs., Williams Bay- Wisconsin (U.S.) ...	40.0
Lick Obs., Mt. Hamilton, California (U.S.) ...	36.0
Paris Obs., Meudon (France)	32.7
Astrophysical Obs., Potsdam (Germany) ...	31.5
Alleghany Obs., Pittsburg (U.S.) ...	30.0
Univ. of Paris, Nice (France)	30.0
Pulkovo Obs. (U.S.S.R.) ...	30.0
U.S. Naval Obs., Washington D. C. ...	26.0
Univ. of Virginia (U.S.) ...	26.0
Yale Univ., Canberra (Aus.)	26.0

REFLECTORS

Hale, Mt. Palomar, Califor- nia (U.S.A.) ...	200
Lick Obs., California (U.S.)	120

REFLECTORS

Cremean Obs. (U.S.S.R.) ...	104
Mt. Wilson Obs., Califor- nia (U.S.A.) ...	100
Newton, Royal Obs. (Gt. Britain) ...	98
Kitt Peak National Obs. Arizona (U.S.) ...	84
McDonald Obs., Texas (U.S.)	82
Tautenberg, Thuringen (Ger.)	80
Saint Michel, Basses Alpes (France) ...	77
David Dunlop Obs., Ontario (Canada) ...	74
Radcliffe, Univ. of S. Africa, Pretoria (S. Africa) ...	74
Mt. Stromlo Obs., Canberra (Australia) ...	74
Helwan Obs., Helwan (Egypt)	74
Okayama Astrophysical Lab. Kamagota (Japan) ...	74

Dominion Astrophysical Obs., Victoria (Canada) ...	72	Harvard Obs., Bloemfontain (S. Africa) ...	60
Perkins Obs., Ohio (U.S.A.)	69	Cordoba Obs., Boscque Alegre (Argentina) ...	61
Harvard Obs., Massachussets (U.S.A.) ...	61		

FAMOUS BELLS

Weight (tons)		Weight (tons)	
Tsar Kolokol (<i>Kremlin, Moscow</i>), 1733 ...	193	River-side Drive Church (<i>New York</i>), 1931 ...	18.25
Moscow Bell (<i>Moscow</i>) ...	128	Campana gorda (<i>Toledo Cathedral, Spain</i>), 1753	17
Mingoon (<i>Mandalay, Burma</i>)	87	Olmütz Bell (<i>Czechoslovakia</i>), 1931 ...	17.9
Chonan (<i>Honshu, Japan</i>) ...	74	Vienna Bell, 1711 ...	17
Great Bell of Peking ...	53	Erfurt Bell (<i>Germany</i>) ...	13
Kaisarglock (<i>Cologne Cathedral, Germany</i>), 1925 ...	25	Cathedral Bourdon (<i>Montreal, Canada</i>), 1847 ...	11.075
Nanking Bell ...	22	Great Tom (<i>Oxford, Eng.</i>)	7.5
Pummerin (<i>St. Stefan's, Vienna</i>), 1957	21.05	Great Tom (<i>Lincoln, Eng.</i>)	5.5
Montmartre (<i>Paris</i>), 1898	19.4	Independence Hall (<i>Philadelphia, U.S.A.</i>) ...	6.5
Great Bear (<i>York Minister, Eng.</i>) ...	17	Danzig (<i>Poland</i>), 1453 ...	6.05
Notre Dame Bell (<i>Paris</i>), 1680	17	Wellington War Memorial (<i>New Zealand</i>), 1929 ...	5
Great Paul (<i>St. Paul's Cathedral, London</i>), 1881	16.75		

HIGHEST BUILDINGS AND STRUCTURES

Height (ft.)		Height (ft.)	
K. T. H. I.—T. V. Mast (<i>Fargo, N. Dakota, U.S.A.</i>)	2,063	Woolworth (<i>N.Y.</i>)* ...	792
W. B. I. R.—T. V. Mast (<i>Knoxville, Tennessee, U.S.A.</i>) ...	1,749	Moscow State Univ. (<i>Moscow</i>)	787
W. G. A. N.—T. V. Mast (<i>Portland, Maine, U.S.A.</i>)	1,619	Palace of Culture & Science (<i>Warsaw</i>) ...	756
Empire State (<i>N.Y.</i>)* ...	1,250	City Bank (<i>N.Y.</i>)* ...	740
TV-Tower (<i>Tokyo</i>) ...	1,082	Union Carbide (<i>N.Y.</i>)* ...	707
Chrysler (<i>N.Y.</i>)* ...	1,046	Metropolitan Life (<i>N.Y.</i>)*	700
Eiffel Tower (<i>Paris</i>) ...	984½	TV-Mast (<i>Stuttgart, Germany</i>)	700
60 Wall Tower (<i>N.Y.</i>)* ...	950	500 5th Avenue (<i>N.Y.</i>)* ...	697
Bank of Manhattan (<i>N.Y.</i>)*	927	Chanin (<i>N.Y.</i>)* ...	680
Rockfeller Centre (<i>N.Y.</i>)*	850	Lincoln (<i>N.Y.</i>)* ...	673
Pan-American Bldg. (<i>N.Y.</i>)*	850	Place Victoria, Stock Exchange Tower (<i>Montreal, Canada</i>) ...	625
Chase Manhattan (<i>N.Y.</i>)*	813	Museum G. P. O. Exchange Tower (<i>London</i>) ...	620

* New York.

Chicago Temple (<i>Chicago, U.S.A.</i>)	...	569	Torre Latino Americana (<i>Mexico City</i>)	...	450
Ulm Cathedral (<i>Germany</i>)	...	529	Havana Hilton Hotel (<i>Havana, Cuba</i>)	...	450
Blackpool Tower (<i>Eng.</i>)	...	518	Pyramid of Cheops (<i>El Gizeh, Egypt</i>)	...	450
Cologne Cathedral (<i>Cologne, Germany</i>)	...	512	St. Peter's (<i>Rome</i>)	...	448
St. John the Divine (<i>N.Y.</i>)	...	500	Edificii Alas (<i>Buenos Aires, Argentina</i>)	...	433
Torre de Madrid (<i>Madrid, Spain</i>)	...	492	Salisbury Cathedral (<i>Eng.</i>)	...	404
Strasbourg Cathedral (<i>Ger.</i>)	...	468	Antwerp Cathedral (<i>Belgium</i>)	...	397
St. Stephen's Cathedral (<i>Vienna</i>)	...	451	Torazzo of Cremona (<i>Italy</i>)	...	397

MANNED ORBITAL FLIGHTS

Yuri Gagarin (USSR)—April 12, 1961—one orbit, 1 hr. 48 m.—26,000 miles.

Alan Shepard (U.S.)—May 5, 1961, 15 minutes.

Virgil Grissom (U.S.)—July 21, 1961, 15 minutes.

Gherman Titov (USSR)—August 6-7, 1961—17 orbits, 25 hrs. 18 m.—7,35,000 miles.

John Glenn (U.S.)—Feb. 20, 1962—3 orbits, 4 hrs. 56 m.—81,250 miles.

Scott Carpenter (U.S.)—May 24, 1962,—3 orbits, 4 hrs. 46 m.—81,250 miles.

Andre Nikolayev (USSR)—August 11-15, 1962—64 orbits, 94 hrs. 25 m.—16,12,000 miles.

Pavel Popovitch (USSR)—August 12-15, 1962—48 orbits, 71 hrs. 3 m.—12,47,000 miles.

Walter Schirra (U.S.)—October 3, 1962—6 orbits, 9 hrs. 13 m.—1,70,000 miles.

Gordon Cooper (U.S.)—May 15, 1953—22 orbits, 34 hrs.—5,95,000 miles.

Valery Bykovsky (USSR)—June 14, 1963—81 orbits, 119 hrs. 54 m.—2,060,000 miles.

Valentina Tareshkova (USSR)—June 16, 1963—48 orbits, 70 hrs. 50 m.—1,250,000 miles.

Col. Vladimir Komarov, Konstatin Feoktistov and Dr. Boris Yegorov (first multi-man flight by U.S.S.R.)—October 12, 1964—16 orbits—4,35,217 miles.

Col. Belyaev and Col. Alexis Leonov (U.S.S.R.)—March 18, 1965, 18 orbits—

First time man walked in space.— Col. Leonov became the first man to step out of the cabin of his spaceship into outer space and returned to his spaceship after spending 10 minutes in space.

Virgil Grissom and John Young (U.S.)—March 23, 1965—3 orbits, 4 hrs. 52 minutes.

James McDivitt and Edward White (U.S.A.)—June 3, 1965—62 orbits, 97 hrs. 58 min.—1,609,684 miles.

During this flight Astronaut Edward White left his 'Gemini' spacecraft attached to a 25-ft. gold cord and was in space for 20 minutes.

ANIMAL AND BIRD RECORDS

- Largest land animal*—African elephant.
- Fastest bird*—Swift, sometimes flies more than 200 miles per hour.
- Largest animal of dog family*—Wolf.
- Largest reptile*—Crocodile.
- Largest carnivore*—Sperm whale.
The male may grow to 65 ft. and 70 tons.
- Largest animal of cat family*—Lion.
- Largest of man-like or anthropoid apes*—Gorilla.
- Largest of the sea-birds*—Albatross.
- Largest amphibian*—Giant salamander of Japan grows over 5 ft. in length and weighs upto 90 lbs.
- Longest gestation period*—Indian elephant, average 620 days.
- Shortest gestation period*—Opossum, average 12 days.
- Largest marsupials*—Kangaroos of Australia, weigh 200 lbs.
- Largest wingspan of a bird*—The wandering albatross of the southern oceans measures upto 11 feet 4 inches in wingspan.
- Largest egg*—The largest egg of a living bird is that of ostrich, measures 6 to 7 in. in length & 4 to 6 in. in diameter.
- Largest dog*—St. Bernard.
- Tallest dog*—Irish Wolfhound.
- Fastest land animal*—Over very short distances, the fastest of land animals is the cheetah with a speed of 84 m.p.h.
- Largest & heaviest mammal*—Blue whale. The adult male may grow to 108 feet in length and 170 tons in weight.
- Largest antelope*—Derby eland of southern Sudan, weighs 2,000 lbs.
- Heaviest bird*—Condor.
- Smallest bird*—Humming bird, only 24 in. long.
- Longest lived creature*—Blue whale (500 years).
- Largest of the flat fish*—Halibut.
- Tallest animal*—Giraffe, sometimes 18 ft. 11.5 in. in height with neck erect.
- Largest living bird*—Ostrich. Males are often 300 lbs. in weight and stand 8 ft. tall.
- Largest lizard*—Komodo Dragon, sometimes 11 ft. long and weighs 365 lbs.

LARGEST SHIPS

<i>Passenger Liners</i>	<i>gross tons</i>	<i>Passenger Liners</i>	<i>gross tons</i>
Queen Elizabeth (Br.)	... 83,673	Rotterdam (Neth.)	... 38,645
Queen Mary (Br.)	... 81,237	Windsor Castle (Br.)	... 37,640
France (Fr.)	... 66,348	Nieuw Amsterdam (Neth.)	36,982
United States (U.S.)	... 52,072	Mauretania (Br.)	... 35,655
Liberte (Fr.)	... 51,839	Caronia (Br.)	... 34,172
Canberra (Br.)	... 45,773	America (U.S.A.)	... 33,961
Michelangelo (Italy)	... 43,000	Oceanic (Panama)	... 33,500
Raffaello (Italy)	... 43,000	Leonardo da Vinci (Italy)	33,340
Oriana (Br.)	... 41,915	Transvaal Castle (Br.)	... 32,697

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<i>Oil Tankers</i>	<i>gross tons</i>	<i>Oil Tankers</i>	<i>gross tons</i>
Nissho Maru (Japan)	... 74,868	Carlo Cameli (Italy)	... 54,000
Universe Daphne (Lib.)	... 72,266	Esso Libya (Br.)	... 53,464
Universe Appollo (Lib.)	... 72,132	Esso Spain (Br.)	... 53,423
Manhattan (U.S.)	... 65,740	Esso London (Br.)	... 53,342
Mobil Brilliant (Br.)	... 58,211	Esso Yorkshire (Br.)	... 53,339
Mobil Daylight (Br.)	... 58,153	Universe Leader (Lib.)	... 51,400
Mobil Comet (Br.)	... 58,057	Universe Commander (Lib.)	... 51,398
Mobil Astral (Br.)	... 58,000	Universe Admiral (Lib.)	... 51,320
Naess Champion (Br.)	... 54,749	Universe Defiance (Lib.)	... 51,320
Naess Sovereign (Br.)	... 54,736	Harold H. Helm (Lib.)	51,320
Esso Den Haag (Neth.)	... 54,299	Esso Hampshire (Br.)	... 50,300

BIGGEST, LARGEST, HIGHEST, LONGEST

Largest Tree	...	... <i>California Redwood</i> in Sequoia National Park, California, base 101 ft.
Biggest Ship	...	... <i>Queen Elizabeth</i> (83,673 tons).
Longest Seaway	...	... <i>St. Lawrence Seaway</i> (U.S.), 189 m.
Largest Diamond Mine	...	... At Kimberly, South Africa.
Largest Diamond	...	... The Cullinan (over 1½ lb.).
Tallest Statue	...	... <i>Statue of Liberty</i> (New York), 305 ft. from base of the pedestal to the top of the torch.
Largest Temple	...	... <i>Angkor-Vat</i> (Cambodia), 1,400 yds. by 1,400 yds.
Largest Church	...	... <i>Basilica of St. Peter</i> , Vatican City, 611 ft. 4 in. in length and 18,110 sq. yds. in area.
Tallest Church	...	... <i>Ulm Cathedral</i> (Ger.), 529 ft. high.
Largest Mosque	...	... <i>Jama Masjid</i> (Delhi), over 10,000 sq. ft. in area.
Longest Corridor	...	... Rameswaram Temples Corridor, 4,000 feet.
Largest Port	...	... <i>New York Harbour</i> (U.S.A.).
Longest Rly. Platform	...	... <i>Storvik</i> (Sweden), 2,470 ft.
Largest Pearl	...	... <i>Pearl of Allah</i> , weighs 14 lb. 2 oz.
Largest Bell	...	... <i>Tsar Kolokol</i> at Kremlin (Moscow), weighs 193 tons, is 22 ft. 8 in. in diameter and over 19 ft. high.
Deepest Mine	...	... <i>East Rand Proprietary Mine</i> (Transvaal, S. Africa), 12,500 ft. deep.
Longest Railway Run	...	... Riga to Vladivostock (U.S.S.R.), 6,000 miles.
Largest Telescope	...	... At Mt. Palomar (California, U.S.A.), diameter of reflector is 200 inches.

Largest Dome	...	...	Above Pittsburgh Civic Arena (Pennsylvania, U.S.A.), 415 ft. in exterior diameter.
Longest Aquaduct	...	...	Colorado River Aquaduct (California, U.S.A.), 242 m. long.
Longest Road Tunnel	...	...	Mont Blanc (France—Italy), 7.2 m. long.
Biggest Library	...	...	United States Library of Congress, (Washington, D. C.). It contained over 41,874,900 items in June, 1962.
Tallest Tower	...	...	Eiffel Tower (Paris), 984½ ft. high.
Largest University Building	...	...	Lomonosov University (Moscow), has 32 stories and 40,000 rooms.
Largest Palace	...	...	The Palace at Vatican City, covers an area of 13.5 acres and has 1,400 rooms, chapels and halls.
Deepest Boring	...	...	An oil well of 25,340 ft. (Texas, U.S.).
Largest Indoor Theatre	...	...	Radio City Music Hall (New York). accommodates 6,200 persons.
Biggest Railway Station	...	...	Grand Central Terminal (New York). with 47 platforms and 67 tracks, 48 acres in area.
Longest Viaduct	...	...	Lake Ponchartrain Causeway (Louisiana, U.S.) with a total length of 24.0 miles.
Highest Lighthouse	...	...	Bishop Rock (England), 146 ft. high.
Largest Zoo	...	...	Kruger National Park (S. Africa).
Largest Sculptures	...	...	Mount Rushmore National Memorial (Black Hills, S. Dakota, U.S.A.) with busts of President G. Washington, T. Jefferson, T. Roosevelt and A. Lincoln.
Largest Concrete Dam	...	...	Grand Coulee on Columbia River (U.S.A.), 10,585,000 cubic yards.
Highest Dam	...	...	Nurek (U.S.S.R.), 978 ft.
Largest Dam	...	...	Fort Peck across Missouri River (U.S.A.), 125,628,000 cubic yards.
Longest Dam	...	...	Hirakud (India), 15.8 m. in total length.
Highest Straight Gravity Dam	...	...	Bhakra Dam (India), 740 ft.
Longest Railway Bridge	...	...	Lower Zambesi (Mozambique, Africa). 11,650 ft. over waterway.
Longest Cantilever Bridge	...	...	Quebec (over St. Lawrence River. Canada), 3,239 ft. in overall length.
Highest Suspension Bridge	...	...	Over Royal Gorge (Colorado, U.S.A.). 1,053 ft. high.

Longest Suspension Bridge	...	<i>Verrazano—Narrows</i> (New York harbour), 13,700 ft. in total length.
Tallest Building	...	<i>Empire State Building</i> (New York), 102 stories, 1,250 ft.
Largest Office Building	...	<i>Pentagon</i> (Arlington, U.S.A.), over 34 acres; floor area : approximately 6,500,000 sq. ft.; has 17 miles of corridor.
Longest Railway Tunnel	...	<i>East Finchley—Morden</i> (London underground Rly. Tunnel), 17¼ miles.
Densest Population	...	In Monaco, 33,898 per sq. m.
Largest Planet	...	<i>Jupiter</i> , with an equatorial diameter of 88,700 miles.
Biggest Park	...	<i>Yellowstone National Park</i> (U.S.), 3,350 sq. miles.
Highest City	...	<i>Phari</i> (Tibet), altitude : 14,300 ft.
Highest Airfield	...	<i>Ladakh airfield</i> (Kashmir), 14,230 ft. above sea-level.
Longest Thoroughfare	...	<i>Broadway</i> (New York).
Biggest Museum	...	<i>American Museum of Natural History</i> , with 19 interconnected buildings; floor area : 23 acres.
Biggest Hotel	...	<i>Conrad Hilton</i> (Chicago, U.S.A.), has 25 floors.
Largest Hospital	...	<i>District Medical Centre</i> (Chicago, U.S.A.), which covers 478 acres and has 5,600 beds.
Biggest Stadium	...	<i>Strahov Stadium</i> (Prague), accommodates 240,000 spectators.
Biggest Auditorium	...	Municipal auditorium at Atlantic City (U.S.A.), covers an area of 7 acres accomodating 41,000 people.

GREAT INVENTIONS

<i>Invention</i>	<i>Inventor</i>	<i>Country</i>	<i>Year</i>
Adding machine	Burroughs	U.S.	1885
Air-brake	G. Westinghouse	U.S.	1868
Air-conditioning	W. H. Carrier	U.S.	1911
Airplane	W. & O. Wright	U.S.	1903
Bakelite	L. H. Baekeland	U.S.	1907
Balloon	Montgolfier Bros.	France	1783
Barometer	E. Torricelli	Italy	1643
Bessemer converter	Sir H. Bessemer	England	1856
Bicycle	MacMillian	Scotland	1842
Canning	Francois Appert	France	1804
Carburettor	G. Daimler	Germany	1879

<i>Invention</i>	<i>Inventor</i>	<i>Country</i>	<i>Year</i>
Cash Register	James Ritty	U.S.	1876
Celluloid	John W. Hyatt	U.S.	1870
Cinemascope	Henri Chretien	France	1931
Clock, pendulum	C. Huygens	Netherlands	1656
Cotton gin	Eli Whitney	U.S.	1793
Cyclotron	E. O. Lawrence	U.S.	1931
Diesel engine	Rudolf Diesel	Germany	1895
Dynamite	Alfred Nobel	Sweden	1866
Dynamo	Picinotti	Italy	1860
Electro-magnet	W. Sturgeon	England	1825
Electric generator	Michael Faraday	England	1831
Electric lamp	T. A. Edison	U.S.	1879
Electric motor, A.C.	Nikola Tesla	U.S.	1892
Electric trolley	F. J. Sprague	U.S.	1887
Elevator, passenger	E. G. Otis	U.S.	1857
Fountain pen	L. E. Waterman	U.S.	1884
Gramophone	Berliner	U.S.	1887
Gyrocompass	E. A. Sperry	U.S.	1905
Gyroscope	Leon Foucault	France	1852
Helicopter	Sikorski	U.S.	1939
Hydroplane	Glenn Curtiss	U.S.	1911
Internal combustion engine	G. Daimler	Germany	1885
Jet propulsion	Sir Frank Whittle	England	1930
Kodak	George Eastman	U.S.	1888
Lamp, incandescent	T. A. Edison	U.S.	1879
Linotype	O. Mergenthaler	U.S.	1885
Locomotive, steam	R. Trevithick	England	1801
Machine gun	R. J. Gatling	U.S.	1861
Match, friction	John Walker	England	1827
Microphone	Berliner	U.S.	1877
Microscope, compound	Z. Janssen	Netherlands	1590
Motor cycle	G. Daimler	Germany	1885
Movie projector	T. A. Edison	U.S.	1893
Nylon	W. H. Carothers	U.S.	1930
Parachute	F. Blanchard	France	1785
Phonograph	T. A. Edison	U.S.	1877
Photography, black & white	Louis. Daguerre	France	1837
Photography, colour	Lippman	France	1891
Pistol	Colt	U.S.	1835
Pneumatic tyre	Dunlop	North Ireland	1888
Printing press	Gutenberg	Germany	1450
Quick freezing of food	Birdseye	U.S.	1925
Radar	Taylor & Young	U.S.	1922
Radio	G. Marconi	Italy	1895
Reaper	C. McCormick	U.S.	1834
Refrigeration, mechanical	Parkins	U.S.	1834

<i>Invention</i>	<i>Inventor</i>	<i>Country</i>	<i>Year</i>
Rifle, automatic	John M. Browning	U.S.	1918
Rocket, liquid fuel	Goddard	U.S.	1926
Rubber, vulcanized	C. Goodyear	U.S.	1839
Safety lamp	Sir H. Davy	England	1816
Safety pin	Walter Hunt	U.S.	1849
Sewing machine	Elias Howe	U.S.	1846
Sleeping-car	G. M. Pullman	U.S.	1858
Spinning jenny	J. Hargreaves	England	1767
Steam engine	James Watt	Scotland	1765
Steamboat	Robert Fulton	U.S.	1803
Stethoscope	Laennec	France	1819
Submarine	John P. Holland	U.S.	1891
Tank, military	E. Swinton	England	1914
Telegraph	Samuel Morse	U.S.	1832
Telephone	A. Graham Bell	U.S.	1876
Telescope	H. Lippershey	Netherlands	1680
Television	John L. Baird	England	1926
Iconoscope	Zworykin	U.S.	1923
Thermometer	Fahrenheit	Germany	1714
Tractor, caterpillar	Holt	U.S.	1900
Typewriter	C. Sholes	U.S.	1868
Vacuum tube	Lee de Forest	U.S.	1907
X-ray machine	W. K. Roentgen	Germany	1895
Zipper	W. L. Judson	U.S.	1893

ELECTRICAL DISCOVERIES AND INVENTIONS

- 1745—Von Kleist (*Ger.*) : Leyden jar condenser. 1852—Gauss (*Ger.*) : System of absolute electric measurements.
- 1752—Franklin (*U.S.*) : Lightning & nature of lightning. 1861—Picinotti (*Italy*) : Electric armature.
- 1791—Galvani (*It.*) : Theory of animal electricity. 1870—Gramme (*Belgium*) : First industrial dynamo.
- 1800—Volta (*It.*) : Electric battery. 1876—Bell (*U.S.*) : Telephone.
- 1805—Brugnatelli (*It.*) : Electroplating. 1878—Crookes (*Eng.*) : Cathode ray.
- 1809—Davy (*Eng.*) : Electric arc lamp. 1879—Swan (*Eng.*) : Electric lamp.
- 1824—Sturgeon (*Eng.*) : Electromagnet. 1879—Edison (*U.S.*) : Electric incandescent lamp.
- 1828—Henry (*U.S.*) : Electromagnetism and induction. 1885—Stanley (*U.S.*) : Electric transformer.
- 1831—Faraday (*Eng.*) : Electric dynamo. 1888—Hertz (*Ger.*) : Electrical waves.
- 1832—Morse (*U.S.*) : Electric telegraph. 1892—Tesla (*U.S.*) : Alternating current motor.
- 1834—Moritz Jacobi (*Ger.*) : Electric motor. 1892—Steinmetz (*U.S.*) : Laws of alternating current.
- 1895—Roentgen (*Ger.*) : X-ray.

- 1896—Marconi (*It.*) : Practical wireless.
 1897—Thomson (*Eng.*) : Isolation of the electron.
 1905—Fleming (*Eng.*) : First diode radio tube.
 1907—De Forest (*U.S.*) : Triode radio tube.
 1914—Coolidge (*U.S.*) : Tungsten filament lamp.
 1944—Baird (*Eng.*) : Television.

MEDICAL DISCOVERIES

- Hippocrates (Greece), 460-377 B.C. known as the father of medicine.
 William Harvey (*Eng.*), 1578-1657 discovered way of blood circulation.
 Antony von Leeuwenhoek (*Neth.*), 1632-1723 ... First man to draw and describe bacteria.
 Edward Jenner (England), 1749-1823 made the discovery of vaccination.
 Laennec (France), 1781-1826 ... invented stethoscope for listening to patient's breathing & heart beats.
 Emil von Behring (Germany) ... discovered diphtheria anti-toxin.
 William Beaumont (*U.S.*), 1785-1853 discovered the function of the stomach in digesting food and part played by the gastric juice.
 Louis Pasteur (France), 1822-1895 ... proved that many diseases are caused by germs.
 Joseph Lister (England), 1827-1912 found certain substances, known as antiseptics that kill disease germs.
 Robert Koch (Germany), 1843-1910 found out bacteria of tuberculosis, anthrax and Asiatic cholera.
 W. K. Roentgen (Germany), 1845-1923 discovered X'ray which enables to see inside of a patient's body.
 Paul Ehrlich (Germany), 1855-1915 Pioneer in the use of injecting chemical substances into blood stream to kill disease germs.
 Sigmund Freud (Austria), 1856-1939 discovered the causes and cures of mental diseases.
 F. G. Banting (Canada), 1891-1941 ... One of the discoverers of *insulin*, which cures diabetes.
 S. Waksman (*U.S.*) ... discovered streptomycin in 1945.
 A. Fleming (*Eng.*), 1881-1957 ... discovered penicillin, the first of anti-biotic drugs.
 H. W. Florey (*Eng.*), 1898- & E. B. Chain (*Eng.*), 1906- ... both discovered penicillin which is effective in different diseases caused by germs.
 G. Domagk (Germany), 1895- ... discovered sulfa drugs.
 Jonas Salk (*U.S.*), 1914 ... discovered anti-polio vaccine in 1955.
 Calmett & Guérin (France) ... discovered B. C. G. in 1920.

THEORIES

- Alternating current, Laws of* : *Isotopes, Theory of* : F. Soddy, Steinmetz, 1892. 1912.
- Atomic theory* : John Dalton, 1803. *Light, Electro-magnetic theory of* : J. C. Maxwell, 1873.
- Atomic numbers* : H. Moseley, 1913. *Light, Velocity of* : Olares Romer, 1675.
- Atom smashing theory* : Rutherford, 1919. *Multiple proportion, Laws of* : John Dalton, 1808.
- Classification of Plants & Animals* : C. Linnaeus, 1737-53. *Molecular hypothesis* : A. Avogadro, 1811.
- Combustion, Nature of* : Lavoisier, 1777. *Ohm's Law* : G. S. Ohm, 1827.
- Conditioned reflex* : I. P. Pavlov, 1910. *Origin of species* : C. Darwin, 1859.
- Displacement of water, Theory of* : Archimedes, 3rd century B.C. *Periodic table* : D. Mendeleef, 1869.
- Dynamic theory of heat* : Kelvin, 1851. *Photo-electric cell, Principles of* : A. Becquerel, 1839.
- Electro-magnetic waves* : Heinrich Hertz, 1886. *Psycho-analysis, Theory of* : Sigmund Freud, 1904.
- Electron, Wave nature of* : Louis Victor de Broglie, 1924. *Quantum Theory* : Max von Planck, 1901.
- Evolution by natural selection* : Charles Darwin, 1859. *Radio-activity* : H. Bacquerel, 1896.
- Falling bodies, Law of* : Galileo, 1590. *Refraction of light, Laws of* : W. Snell, 1621.
- Gravitation, Laws of* : Issac Newton, 1687. *Relativity, Theories of* : A. Einstein, 1905-53.
- Germ Theory* : Louis Pasteur, 1876. *Spectrum analysis* : R. Bunsen & G. Kirchhoff, 1859.
- Gases, Laws governing* : Joseph Gay-Lussac, 1809. *Sulfanilamide theory* : Gelmo (Ger.), 1908.
- Heredity, Laws of* : G. Mendel, 1865. *Uranium fission theory* : Hahn, (Ger.), Strassman (Ger.), Bohr (Danish), Fermi (Italian), Wheeler, Pegram and Einstein (U.S.).
- Intelligence testing, modern* : A. Binet & T. Simon, 1905. *Water, Synthesis of* : H. Cavendish, 1781.

NOBEL PRIZES

1. Physics

- | | | | |
|------|---|------|--------------------------|
| 1901 | W. K. Roentgen (Ger.). | 1904 | Lord Rayleigh (England). |
| 1902 | H. A. Lorentz and P. Zeeman (Holland). | 1905 | Philipp Lenard (Ger.). |
| | | 1906 | J. J. Thomson (Eng.). |
| 1903 | A. H. Becquerel (France) : Pierre & Marie Curie (France). | 1907 | A. A. Michelson (U.S.). |
| | | 1908 | G. Lippmann (France). |
| | | 1909 | G. Marconi (Italy) and |

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|------|--|---------|--|
| | F. Braun (<i>Germany</i>). | 1940-42 | No award. |
| 1910 | J. D. van der Waals (<i>Holland</i>). | 1943 | Otto Stern (<i>U.S.</i>). |
| | | 1944 | Isidor I. Rabi (<i>U.S.</i>). |
| 1911 | W. Wien (<i>Ger.</i>). | 1945 | W. Pauli (<i>Austria</i>). |
| 1912 | Gustaf Dalen (<i>Sweden</i>). | 1946 | P. W. Bridgman (<i>U.S.</i>). |
| 1913 | H. Kamerlingh-Onnes (<i>Neth.</i>). | 1947 | Sir E. Appleton (<i>Eng.</i>). |
| 1914 | M. von Laue (<i>Ger.</i>). | 1948 | P. M. S. Blackett (<i>Eng.</i>). |
| 1915 | W. H. Bragg and W. L. Bragg (<i>Eng.</i>). | 1949 | Hideki Yukawa (<i>Japan</i>). |
| | No award. | 1950 | C. F. Powell (<i>Eng.</i>). |
| 1916 | | 1951 | Sir John Cockcroft (<i>Eng.</i>) and E. T. S. Walton (<i>Ire.</i>). |
| 1917 | C. G. Barkla (<i>Eng.</i>). | | |
| 1918 | Max von Planck (<i>Ger.</i>). | 1952 | E. M. Purcell and Felix Bloch (<i>U.S.</i>). |
| 1919 | J. Stark (<i>Ger.</i>). | | |
| 1920 | C. E. Guillaume (<i>Switz.</i>). | 1953 | Fritz Zernike (<i>Holland</i>). |
| 1921 | A. Einstein (<i>Ger.</i>). | 1954 | S. Max Born (<i>Eng.</i>) and Walther Bothe (<i>Ger.</i>). |
| 1922 | Niels Bohr (<i>Denmark</i>). | | |
| 1923 | R. A. Millikan (<i>U.S.</i>). | 1955 | W. E. Lamb and P. Kusch (<i>U.S.</i>). |
| 1924 | Karl M. G. Seigbahn (<i>Swed.</i>). | | |
| 1925 | James Franck (<i>Ger.</i>) & Gustav Hertz (<i>Ger.</i>). | 1956 | Walter H. Brattain, W. Shockley and John Bardeen (<i>U.S.</i>). |
| 1926 | Jean B. Perrin (<i>France</i>). | | |
| 1927 | Arthur Compton (<i>U.S.</i>) & Charles T. R. Wilson (<i>Eng.</i>). | 1957 | Tsung Dao Lee and Chen Ning Yang (<i>China</i>). |
| 1928 | O. W. Richardson (<i>Eng.</i>). | | |
| 1929 | L. V. de Broglie (<i>Fr.</i>). | 1958 | Pavel A. Cherenkov, Ilya M. Frank and Igor E. Tamm (<i>USSR</i>). |
| 1930 | Sir C. V. Raman (<i>India</i>). | | |
| 1931 | No award. | 1959 | Dr. Emilio Segre and Owen Chamberlain (<i>U.S.</i>). |
| 1932 | W. Heisenberg (<i>Ger.</i>). | | |
| 1933 | Paul A. M. Dirac (<i>Eng.</i>) & Erwin Schroedinger (<i>Aus.</i>). | 1960 | Donald A. Glaser (<i>U.S.</i>). |
| | No award. | 1961 | Robert Hofstadter (<i>U.S.</i>) & R. Mossbauer (<i>W. Ger.</i>). |
| 1934 | | | |
| 1935 | J. Chadwick (<i>England</i>). | 1962 | Lev D. Landau (<i>USSR</i>). |
| 1936 | V. F. Hess (<i>Austria</i>) and C. D. Anderson (<i>U.S.</i>). | 1963 | Eugene P. Wigner (<i>U.S.</i>), Maria Goeppert-Mayer (<i>U.S.</i>) & Hans D. Jensen (<i>Ger.</i>). |
| 1937 | C. J. Davisson (<i>U.S.</i>) and G. P. Thomson (<i>England</i>). | | |
| 1938 | E. Fermi (<i>Italy</i>). | 1964 | Charles Townes (<i>U.S.</i>); Nikolai Basov & A. Proshorov (<i>U.S.S.R.</i>). |
| 1939 | E. O. Lawrence (<i>U.S.</i>). | | |

2. Medicine and Physiology

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|------|------------------------------------|------|---|
| 1901 | E. A. von Behring (<i>Ger.</i>). | 1906 | Ramony Cajal (<i>Spain</i>) and Camillo Golgi (<i>Italy</i>). |
| 1902 | Sir Ronald Ross (<i>Eng.</i>). | | |
| 1903 | N. R. Finsen (<i>Denmark</i>). | 1907 | C. L. A. Laveran (<i>France</i>). |
| 1904 | Ivan P. Pavlov (<i>Russia</i>). | 1908 | Paul Ehrlich (<i>Ger.</i>) & E. Metchnikoff (<i>Fr.</i>). |
| 1905 | Robert Koch (<i>Germany</i>). | | |

- 1909 T. Kocher (*Sweden*).
 1910 A. Kossel (*Germany*).
 1911 A. Gullstrand (*Sweden*).
 1912 A. Carrel (*U.S.*).
 1913 Charles Richet (*France*).
 1914 R. Barany (*Austria*).
 1915-18 No award.
 1919 Dr. J. Bordet (*Belgium*).
 1920 August Krogh (*Denmark*).
 1921 No award.
 1922 A. V. Hill (*Eng.*) and Otto Meyerhof (*Ger.*).
 1923 F. G. Banting and J. J. R. MacLeod (*Canada*).
 1924 W. Einthoven (*Holland*).
 1925 No award.
 1926 J. Fibiger (*Denmark*).
 1927 J. Wagner-Jauregg (*Aus.*).
 1928 Charles Nicolle (*France*).
 1929 F. G. Hopkins (*Eng.*) and C. Eijkmann (*Holland*).
 1930 Karl Landsteiner (*U.S.*).
 1931 Otto H. Warburg (*Ger.*).
 1932 Sir C. S. Sherrington & E. D. Adrian (*England*).
 1933 T. H. Morgan (*U.S.*).
 1934 G. R. Minot, W. P. Murphy & G. H. Whipple (*U.S.*).
 1935 Hans Spemann (*Ger.*).
 1936 Sir Henry Dale (*Eng.*) & Prof. Otto Loewe (*Austria*).
 1937 A. Szent-Gyorgyi (*Hungary*).
 1938 C. Heymans (*Belgium*).
 1939 G. Domagk (*Ger.*) declined.
 1940-42 No award.
 1943 Henrik Dam (*Den.*) and Edward Doisy (*U.S.*).
 1944 Joseph Erlanger and Herbert Gasser (*U.S.*).
 1945 Sir A. Fleming, Sir Howard Florey (*England*) and E. B. Chain (*Germany*).
 1946 H. J. Muller (*U.S.*).
 1947 Dr. Carl F. and Gerty Cori (*U.S.*) and B. A. Houssay (*Argentina*).
 1948 Paul Mueller (*Switz.*).
 1949 W. R. Hess (*Switz.*) & A. C. A. F. E. Moniz (*Portugal*).
 1950 E. C. Kendall, Phillip S. Hench (*U.S.*) & T. Reichstein (*Switz.*).
 1951 Max Theiler (*S. Africa*).
 1952 S. A. Waksman (*U.S.*).
 1953 Dr. Hans A. Krebs (*Eng.*) & Dr. Fritz A. Lipmann (*U.S.*).
 1954 J. F. Enders, F. C. Robbins & T. H. Weller (*U.S.*).
 1955 Hugo Theorell (*Sweden*).
 1956 Andre Cournand (*U.S.*), Dr. W. Forssmann (*Ger.*) & D. W. Richards (*U.S.*).
 1957 Daniel Bovet (*Italy*).
 1958 G. W. Beadle, Joshua Lederberg & E. L. Tatum (*U.S.*).
 1959 Severo Ochoa & Arthur Kornberg (*U.S.*).
 1960 Sir M. Burnet (*Australia*) & Peter B. Medawar (*Eng.*).
 1961 George von Békésy (*U.S.*).
 1962 Dr. Francis Crick (*Eng.*), Dr. Maurice Wilkins (*Eng.*) and Dr. J. D. Watson (*U.S.*).
 1963 Sir John Eccles (*Australia*), Dr. A. L. Hodgkin (*Eng.*) & A. F. Huxley (*Eng.*).
 1964 Conrad Block (*U.S.*) & Theodor Lynen (*W. Germany*).

3. Chemistry

- 1901 J. H. Van't Hoff (*Holland*).
 1902 Emil Fischer (*Germany*).
 1903 S. A. Arrhenius (*Sweden*).
 1904 Sir W. Ramsay (*Eng.*).
 1905 A. von Baeyer (*Ger.*).
 1906 Henri Moissan (*France*).
 1907 E. Buchner (*Germany*).
 1908 Ernest Rutherford (*Eng.*).
 1909 Wilhelm Ostwald (*Ger.*).
 1910 Otto Wallach (*Germany*).

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|---|---|
| 1911 Marie Curie (<i>France</i>). | and Leopold Ruzicka (<i>Swiss</i>). |
| 1912 V. Grignard and P. Sabatier (<i>France</i>). | 1940-42 No award. |
| 1913 Alfred Werner (<i>Swiss</i>). | 1943 G. Hevesy De Heves (<i>Hung.</i>) |
| 1914 T. W. Richards (<i>England</i>). | 1944 Otto Hahn (<i>Ger.</i>). |
| 1915 R. Willstätter (<i>Ger.</i>). | 1945 Artturi Virtanen (<i>Finland</i>). |
| 1916-17 No award. | 1946 James B. Sumner, W. M. Stanley & J. H. Northrop (<i>U.S.</i>). |
| 1918 Firtz Haber (<i>Germany</i>). | |
| 1919 No award. | 1947 Sir Robert Robinson (<i>Eng.</i>). |
| 1920 Walther Nernst (<i>Ger.</i>). | 1948 Arne Tiselius (<i>Sweden</i>). |
| 1921 Frederick Soddy (<i>Eng.</i>). | 1949 W. F. GIAUQUE (<i>U.S.A.</i>). |
| 1922 F. W. Aston (<i>England</i>). | 1950 Otto Diels & Kurt Alder (<i>Germany</i>). |
| 1923 Fritz Pregl (<i>Australia</i>). | |
| 1924 No award. | 1951 E. M. McMillian & G. T. Seaborg (<i>U.S.A.</i>). |
| 1925 R. Zsigmondy (<i>Ger.</i>). | 1952 A. J. P. Martin & R. L. M. Synge (<i>Eng.</i>). |
| 1926 T. Svedberg (<i>Sweden</i>). | |
| 1927 H. Wieland (<i>Germany</i>). | 1953 Herman Staudinger (<i>Ger.</i>). |
| 1928 Dr. Adolf Windaus (<i>Ger.</i>). | 1954 Dr. L. Pauling (<i>U.S.A.</i>). |
| 1929 A. Harden (<i>Eng.</i>) and H. S. von Euler-Chelpin (<i>Sweden</i>). | 1955 Vincent du Vigneaud (<i>U.S.</i>). |
| 1930 Hans Fischer (<i>Germany</i>). | 1956 Sir Cyril Hinshelwood (<i>Eng.</i>) & Nikolai Semenov (<i>USSR</i>). |
| 1931 Carl Bosch and F. Bergius (<i>Germany</i>). | 1957 Sir A. Todd (<i>Eng.</i>). |
| 1932 Irving Langmuir (<i>U.S.</i>). | 1958 Frederick Sanger (<i>Eng.</i>). |
| 1933 No award. | 1959 Jaroslav Heyrovsky (<i>Czech.</i>). |
| 1934 H. C. Urey (<i>U.S.</i>). | 1960 Willard F. Libby (<i>U.S.</i>). |
| 1935 Frederic & Irene Joliot-Curie (<i>France</i>). | 1961 Melvin Calvin (<i>U.S.</i>). |
| 1936 Peter J. W. Debye (<i>Ger.</i>). | 1962 Max F. Perutz & Dr. J. C. Kendrew (<i>Eng.</i>). |
| 1937 W. N. Haworth (<i>Eng.</i>) and Paul Karrer (<i>Swiss.</i>). | 1963 Karl Ziegler (<i>West Ger.</i>) & Giulio Natta (<i>Italy</i>). |
| 1938 R. Kuhn (<i>Ger.</i>) declined. | 1964 Dorothy Crowfoot Hodgkin (<i>Eng.</i>). |
| 1939 A. Butenandt (<i>Ger.</i>), declined | |

4. Literature

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| 1901 Rene F. A. Sully-Prudhomme (<i>France</i>). | 1909 Selma Lagerlof (<i>Sweden</i>). |
| 1902 T. Mommsen (<i>Germany</i>). | 1910 Paul Heyse (<i>Germany</i>). |
| 1903 B. Bjornson (<i>Norway</i>). | 1911 M. Maeterlinck (<i>Belgium</i>). |
| 1904 F. Mistral (<i>France</i>) and Jose Echegaray (<i>Spain</i>). | 1912 G. Hauptmann (<i>Ger.</i>). |
| 1905 H. Sienkiewicz (<i>Poland</i>). | 1913 Rabindranath Tagore (<i>India</i>). |
| 1906 G. Carducci (<i>Italy</i>). | 1914 No award. |
| 1907 Rudyard Kipling (<i>Eng.</i>). | 1915 Romain Rolland (<i>France</i>). |
| 1908 R. Eucken (<i>Germany</i>). | 1916 V. Heidenstam (<i>Sweden</i>). |
| | 1917 Karl Gjellerup and H. Pontoppidan (<i>Denmark</i>). |

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|------|--------------------------------------|---------|--|
| 1918 | No award. | 1940-43 | No award. |
| 1919 | C. Spitteler (<i>Swiss</i>). | 1944 | J. V. Jensen (<i>Denmark</i>). |
| 1920 | Knut Hamsun (<i>Norway</i>). | 1945 | Gabriela Mistral (<i>Chile</i>). |
| 1921 | Anatole France (<i>France</i>). | 1946 | Hermann Hesse (<i>Swiss</i>). |
| 1922 | J. Benavente (<i>Spain</i>). | 1947 | Andre Gide (<i>France</i>). |
| 1923 | W. B. Yeats (<i>Ireland</i>). | 1948 | T. S. Eliot (<i>England</i>). |
| 1924 | W. Reymont (<i>Poland</i>). | 1949 | W. Faulkner (<i>U.S.</i>). |
| 1925 | G. B. Shaw (<i>England</i>). | 1950 | Bertrand Russell (<i>Eng.</i>). |
| 1926 | Grazia Deledda (<i>Italy</i>). | 1951 | Par Lagerkvist (<i>Sweden</i>). |
| 1927 | Henri Bergson (<i>France</i>). | 1952 | Francois Mauriac (<i>Fr.</i>). |
| 1928 | Sigrid Undset (<i>Norway</i>). | 1953 | Winston S. Churchill (<i>Eng.</i>). |
| 1929 | Thomas Mann (<i>Germany</i>). | 1954 | E. Hemingway (<i>U.S.</i>). |
| 1930 | Sinclair Lewis (<i>U.S.</i>). | 1955 | Halldor K. Laxness (<i>Iceland</i>). |
| 1931 | Erik A. Karlfeldt (<i>Sweden</i>). | 1956 | Juan R. Jimenez (<i>Spain</i>). |
| 1932 | J. Galsworthy (<i>England</i>). | 1957 | Albert Camus (<i>France</i>). |
| 1933 | Ivan G. Bunin (<i>Russia</i>). | 1958 | Boris Pasternak (<i>U.S.S.R.</i>)* |
| 1934 | Luigi Pirandello (<i>Italy</i>). | 1959 | Salvatore Quasimodo (<i>Italy</i>). |
| 1935 | No award. | 1960 | Alexis Leger (<i>France</i>). |
| 1936 | Eugene O'Neill (<i>U.S.</i>). | 1961 | Ivo Andric (<i>Yugoslavia</i>). |
| 1937 | R. M. du Gard (<i>France</i>). | 1962 | John Steinbeck (<i>U.S.</i>). |
| 1938 | Pearl S. Buck (<i>U.S.</i>). | 1963 | G. Seferis (<i>Greece</i>). |
| 1939 | Eemil Sillanpaa (<i>Finland</i>). | 1964 | Jean-Paul Sartre (<i>France</i>)* |

5. Peace

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|------|---|---------|--|
| 1901 | Henri Dunant (<i>Switzerland</i>) | 1912 | Elihu Root (<i>U.S.</i>). |
| | & Frederick Passy (<i>Fr.</i>). | 1913 | H. La Fontaine (<i>Belgium</i>). |
| 1902 | Elie Ducommun and A. Gobat (<i>Switzerland</i>). | 1914-16 | No award. |
| 1903 | W. R. Cremer (<i>Eng.</i>). | 1917 | International Red Cross (<i>Geneva</i>). |
| 1904 | Institute of International Law (<i>Belgium</i>). | 1918 | No award. |
| 1905 | Bertha von Suttner (<i>Austria</i>). | 1919 | Woodrow Wilson (<i>U.S.</i>). |
| 1906 | T. Roosevelt (<i>U.S.</i>). | 1920 | Leon Bourgeois (<i>France</i>). |
| 1907 | E. T. Moneta (<i>Italy</i>) and Louis Renault (<i>France</i>). | 1921 | K. H. Branting (<i>Sweden</i>) & Christian Lange (<i>Norway</i>). |
| 1908 | K. P. Arnoldson (<i>Sweden</i>) & Frederick Bajer (<i>Denmark</i>). | 1922-24 | No award. |
| 1909 | Baron de Constant (<i>Fr.</i>) and A. Beernaert (<i>Belgium</i>). | 1925 | Charles G. Dawes (<i>U.S.</i>) & Sir A. Chamberlain (<i>Eng.</i>). |
| 1910 | International Peace Bureau (<i>Switzerland</i>). | 1926 | Aristide Briand (<i>France</i>) & G. Stresemann (<i>Ger.</i>). |
| 1911 | T. M. C. Asser (<i>Holland</i>) & A. H. Fried (<i>Austria</i>). | 1927 | F. Buisson (<i>France</i>) and Ludwig Quidde (<i>Germany</i>). |
| | | 1928 | No award. |

* Refused acceptance.

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| 1929 F. B. Kellogg (U.S.). | 1948 No award. |
| 1930 Lars O. J. Soderblom (Swed.). | 1949 Lord Boyd-Orr (Eng.). |
| 1931 Jane Addams and Nicholas M. Butler (U.S.). | 1950 Ralph J. Bunche (U.S.). |
| 1932 No award. | 1951 Leon Jouhaux (France). |
| 1933 Sir Norman Angell (Eng.). | 1952 Albert Schweitzer (France). |
| 1934 A. Henderson (England.) | 1953 George C. Marshall (U.S.). |
| 1935 Carl von Ossietzky (Ger.). | 1954 Office of the U. N. High Commissioner for Refugees. |
| 1936 C. de S. Lamas (Argentina). | 1955 No award. |
| 1937 Viscount Cecil (England). | 1956 No award. |
| 1938 Nansen International Office for Refugees (Geneva). | 1957 Lester B. Pearson (Canada). |
| 1939-43 No award. | 1958 G. Henri Pire (Belgium). |
| 1944 International Committee of Red Cross (Switzerland). | 1959 Philip Noel-Baker (Eng.). |
| 1945 Cordell Hull (U.S.). | 1960 A. J. Luthuli (South Africa). |
| 1946 Eamail G. Balch and John R. Mott (U.S.). | 1961 Dag Hammarskjöld (Swed.). |
| 1947 American Friends Service Committee (U.S.) & Br. Society of Friends Service Council (Eng.). | 1962 D. E. C. Pauling (U.S.). |
| | 1963 International Red Cross Committee & Red Cross League (Switzerland). |
| | 1964 Dr. Martin Luther King (U.S.). |

KALINGA PRIZE

[The Kalinga Prize for the popularization of science is offered annually by Mr. B. Palnaik, a big industrialist and the ex-Chief Minister of Orissa, through UNESCO. This prize of £1000 sterling is offered to the leading writers of science and for strengthening links between India and scientists from all nations.]

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|-----------------------------------|-----------------------------------|
| 1952 Louis de Broglie (France). | 1959 Jean Rostand (France). |
| 1953 Dr. Julian Huxley (Britain). | 1960 Ritchi Calder (England). |
| 1954 W. Kaempffert (U.S.). | 1961 Arthur G. Clark (Eng.). |
| 1955 Dr. A. P. Sunyer (Venezuela) | 1962 Gerard Piel (U.S.). |
| 1956 Prof. G. Gamov (U.S.). | 1963 Jagjit Singh (India). |
| 1957 Bertrand Russell (England). | 1964 Dr. R. Warren Weaver (U.S.). |
| 1958 Karl Von Frisch (Austria). | |

UNITED NATIONS

ORIGIN— The United Nations Organisation was first discussed at Dumbarton Oaks Conference, Washington D. C., between Sept. 21 and 28, 1944. It was finally put to concrete shape at San Francisco between April 25 and June 26, 1945, where representatives of 50 Allied Nations signed the United Nations Charter. The U. N. officially came into existence on October 24, 1945. It was decided that the seat of the organisation should be in New York and a new building was erected in Manhattan costing £23,000,000.

PURPOSES OF U. N.— Four purposes of the U. N. are—(1) to maintain international peace and security, (2) to develop friendly relations among nations, (3) to co-operate internationally in solving economic, social, cultural and humanitarian problems and in promoting respect for human rights and fundamental freedoms, and (4) to be a centre for harmonizing the actions of nations in attaining these common ends.

FINANCE— The United Nations is financed by the contributions from member States, Member States contribute to the expenses of the budget and to the Working Capital Fund on a scale determined by the General Assembly each year on the recommendation of its Committee on Contributions.

OFFICIAL LANGUAGES— The official languages of the U. N. are Chinese, English, French, Russian and Spanish. Its working languages are English and French. Spanish is also the working language of the General Assembly.

MEMBERSHIP— Membership of the United Nations is open to all peace-loving nations that accept the obligations of the U. N. Charter and are able and willing to carry out these obligations.

ROSTER OF THE UNITED NATIONS

Following the admission of a series of new States, the United Nations now has 117 members. They are enlisted below with respective dates of admission to the U.N.

<i>Member</i>	<i>Date of Admission</i>	<i>Member</i>	<i>Date of Admission</i>
Afghanistan	19 Nov. 1946	Brazil	24 Oct. 1945
Albania	14 Dec. 1955	Bulgaria	14 Dec. 1955
Algeria	8 Oct. 1962	Burma	19 Apr. 1948
Argentina	24 Oct. 1945	Burundi	18 Sep. 1962
Australia	1 Nov. 1945	Byelorussia	24 Oct. 1945
Austria	14 Dec. 1955	Cambodia	14 Dec. 1955
Belgium	27 Dec. 1945	Cameroun	20 Sep. 1960
Bolivia	14 Nov. 1945	Canada	9 Nov. 1945

Member	Date of Admission		Member	Date of Admission	
Central African Republic	20 Sep.	1960	Lebanon	24 Oct.	1945
Ceylon	14 Dec.	1955	Liberia	2 Nov.	1945
Chad	20 Sep.	1960	Libya	14 Dec.	1955
Chile	24 Oct.	1945	Luxembourg	24 Oct.	1945
China	24 Oct.	1945	Madagascar	20 Sep.	1960
Colombia	5 Nov.	1945	Malawi	1 Dec.	1964
Congo	20 Sep.	1960	Malaysia	17 Sep.	1957
Congo, Democratic Republic of	20 Sep.	1960	Mali	28 Sep.	1960
Costa Rica	2 Nov.	1945	Malta	1 Dec.	1964
Cuba	24 Oct.	1945	Maldives	Sept.	1965
Cyprus	20 Sep.	1960	Mauritania	27 Oct.	1961
Czechoslovakia	24 Oct.	1945	Mexico	7 Nov.	1945
Dahomey	20 Sep.	1960	Mongolia	27 Oct.	1961
Denmark	24 Oct.	1945	Morocco	12 Nov.	1956
Dominican Republic	24 Oct.	1945	Nepal	14 Dec.	1955
Ecuador	21 Dec.	1945	Netherlands	10 Dec.	1945
El Salvador	24 Oct.	1945	New Zealand	24 Oct.	1945
Ethiopia	13 Nov.	1945	Nicaragua	24 Oct.	1945
Finland	14 Dec.	1955	Niger	20 Sep.	1960
France	24 Oct.	1945	Nigeria	7 Oct.	1960
Gaboon	20 Sep.	1960	Norway	27 Nov.	1945
Gambia	15 Nov.	1964	Pakistan	30 Sep.	1947
Ghana	8 Mar.	1957	Panama	13 Nov.	1945
Greece	25 Oct.	1945	Paraguay	24 Oct.	1945
Guatemala	21 Nov.	1945	Peru	31 Oct.	1945
Guinea	12 Dec.	1958	Philippines	24 Oct.	1945
Haiti	24 Oct.	1945	Poland	24 Oct.	1945
Honduras	17 Dec.	1945	Portugal	14 Dec.	1955
Hungary	14 Dec.	1955	Rumania	14 Dec.	1955
Iceland	19 Nov.	1946	Rwanda	18 Sep.	1962
India	30 Oct.	1945	Saudi Arabia	24 Oct.	1945
Indonesia	28 Sept.	1950	Senegal	28 Sep.	1960
(withdrew on Jan. 21, 1965).			Sierra Leone	27 Sep.	1961
Iran	24 Oct.	1945	Singapore	Sept.	1965
Iraq	21 Dec.	1945	Somalia	20 Sep.	1960
Ireland	14 Dec.	1955	South Africa	7 Nov.	1945
Israel	11 May	1949	Spain	14 Dec.	1955
Italy	14 Dec.	1955	Sudan	12 Nov.	1956
Ivory Coast	20 Sep.	1960	Sweden	19 Nov.	1946
Jamaica	18 Sep.	1962	Syria	24 Oct.	1945
Japan	18 Dec.	1956	Tanzania	14 Dec.	1961
Jordan	14 Dec.	1955	Thailand	16 Dec.	1946
Kenya	16 Dec.	1963	Togo	20 Sep.	1960
Kuwait	14 May	1963	Trinidad & Tobago	18 Sep.	1962
Laos	14 Dec.	1955	Tunisia	12 Nov.	1956
			Turkey	24 Oct.	1945
			Uganda	25 Oct.	1962

Ukraine	24 Oct.	1945	Uruguay	18 Dec.	1945
United Arab Republic	24 Oct.	1945	USSR	24 Oct.	1945
United Kingdom	24 Oct.	1945	Venezuela	15 Nov.	1945
United States	24 Oct.	1945	Yemen	30 Sep.	1947
Upper Volta	20 Sep.	1960	Yugoslavia	24 Oct.	1945
			Zambia	1 Dec.	1964

HEADQUARTERS AND OFFICES— The headquarters of the U.N. is at New York (U.S.A.). The European office of the U.N. is at Geneva. From 1954 U.N. Information Centres have been operating at Athens, Bogota, Buenos Aires, Belgrade, Cairo, Copenhagen, Geneva, Karachi, London, Mexico City, Monrovia, Moscow, New Delhi, Paris, Prague, Rio de Janeiro, Shanghai, Sydney, Teheran and Washington.

UNITED NATIONS' FLAG— The flag is light blue in colour and emblazoned in white in its centre is the United Nations' symbol, a polar map of the world embraced by twin olive branches.

Organs of the United Nations

Principal organs of the United Nations are—(1) *General Assembly*; (2) *Security Council*; (3) *Economic and Social Council*; (4) *Trusteeship Council*; (5) *International Court of Justice*; and (6) *Secretariat*.

GENERAL ASSEMBLY— It consists of all the members of the United Nations, each with one vote but none with veto power. Each member is entitled to be represented at its meeting by five representatives. The General Assembly meets once a year in regular session sometime in September. It may also hold special sessions. Voting on important questions is by a single majority. The work of the General Assembly is divided between seven main Committees.

Committees—To facilitate its work, the General Assembly breaks up into seven main Committees: (1) Political and Security (including regulation of armaments); (2) Economic and Financial; (3) Social, Humanitarian and Cultural; (4) Trusteeship; (5) Administrative and Budgetary; (6) Legal; (7) Special Political Committee.

SECURITY COUNCIL— The Security Council is primarily responsible for keeping international peace and security. Any nation, U.N. member or not, and Secretary-General may bring a dispute or a threat to peace to the attention of the Security Council. It has eleven members, five of which (United States, U.K., France, U.S.S.R. and China) are permanent. Six non-permanent members are elected by the General Assembly for a 2-year term. Members are not eligible for immediate re-election. The Security Council is organised to be able to function continuously. Each member acts as the Council's President for one month. A negative vote by any permanent member is a veto. The Security Council can take no action if any member does not agree, i.e., uses the veto. If the question to be discussed concerns one of the permanent members, that member is not allowed to vote. An abstention is not regarded in practice as a vote against.

ECONOMIC AND SOCIAL COUNCIL— This consists of 18 members, 6 of which are elected by the General Assembly for a period of three years. It works towards establishing lasting world peace by helping the poor, the sick and the illiterate all over the world. Through its Functional and Regional Economic Commission, the specialised agencies, the Technical Assistance Committee and consultation with non-governmental organisations, the Economic and Social Council promotes better social, economic, educational and health conditions and respect universal for, and observance of, human rights and fundamental freedom for all peoples without the distinction as to race, sex, language, or religion.

Functional Commissions—work on specific problems through the Commissions of experts and its sub-commission on prevention of Discrimination and Protection of minorities. The functional Commissions are—Fiscal, Statistical, Population, Social, Narcotics, Human Rights and International Commodity Trade.

Regional Economic Commissions are in four centres—(1) Economic Commission for Europe (ECE) at Geneva ; (2) Economic Commission for Asia and the Far East (ECAFE) at Bangkok ; (3) Economic Commission for Latin America (ECLA) at Santiago (Chile) ; (4) Economic Commission for Africa (ECA) at Addis Ababa (Ethiopia).

TRUSTEESHIP COUNCIL— is responsible for the supervision of the administration of trust territories (consisting, for most part, of former mandates) placed under its jurisdiction. It is the only organ of the U.N. in which the exact number of members is non-specified. Membership consists of (1) nations administering trust territories ; (2) permanent members of the Security Council, which do not administer such territories ; (3) General Assembly which elects for three years as many additional members as may be necessary to ensure that the total membership is equally divided between countries administering trust territories and countries which do not.

Trusteeship Territories—The Trusteeship Territories consist of following territories now—(1) Nauru (Australia, New Zealand and U.K.), (2) New Guinea (Australia), Trust Territory of Pacific Islands (U.S.A.).

INTERNATIONAL COURT OF JUSTICE— It is the principal judicial body of the United Nations. All members of the U.N. are *ipso facto* parties of the Statute of the Court. The International Court of Justice considers disputes between member-nations. It is a Court of Law and deals with legal questions only, not with political disputes. All countries which are parties to the Statute of the Court, can refer to it any case they wish. In addition, the Security Council may refer a legal dispute to the Court and all organs of the U.N. can ask the Court for an advisory opinion on any legal question. The decisions of the Court are final, but are binding only between the parties concerned.

The Court consists of fifteen Judges elected for a 9-year term by the General Assembly and the Security Council, voting independently.

The seat of the International Court of Justice is at the Hague, in Netherlands.

SECRETARIAT— This is composed of the Secretary-General who is the chief administrative officer of the organisation and such staff as the

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organisation requires. He is appointed for a period of 5 years by the General Assembly on the recommendation of the Security Council and may be reappointed.

Secretary-General : U Thant (Burma)

PRINCIPAL OFFICERS OF U.N. SECRETARIAT :

Chef de Cabinet : C. V. Narasimham (India).

Legal Counsel : Constantin Stavropoulos (Greece).

Controller : Bruce R. Turner (New Zealand).

Director of Personnel : Sir Alexander McFarquhar (U.K.).

Under-Secretary for Special Political Affairs : Ralph J. Bunche (U.S.A.).

Under-Secretary for Political and Security Council Affairs : V. P. Suslov (U.S.S.R.).

Under-Secretary for Economic and Social Affairs : Philippe de Seynes (France).

Managing Director of the United Nations Special Fund : Paul Hoffman (U.S.A.).

Executive Secretary, Economic Commission for Europe : Vladimir Velebit (Yugoslavia).

Executive Secretary, Economic Commission for Asia and the Far East : U Nyun (Burma).

Executive Secretary, Economic Commission for Latin America : Jose Mayobre (Venezuela).

Executive Secretary, Economic Commission for Africa : Robert Gardiner (Ghana)

Under-Secretary for Trusteeship and Information from Non-Self-Governing Territories : G. Amachree (Nigeria).

Under-Secretary for Public Information : Hernane Tavares de Sa (Brazil).

Under-Secretary for Conference Services : Jiri Nosek (Czechoslovakia).

Director of General Services : David B. Vaughan (U.S.A.).

Executive Director, United Nations Children's Fund (UNICEF) : Maurice Pate (U.S.A.).

Executive Chairman, Technical Assistance Board : David Owen (United Kingdom).

Director, United Nations European Office, Geneva : P. P. Spinelli (Italy).

United Nations High Commissioner for Refugees : Felix M. Schnyder (Switzerland).

Director of United Nations Relief and Works Agency for Palestine Refugees : John H. Davies (U.S.A.).

Specialised Agencies

INTERNATIONAL LABOUR ORGANISATION (ILO)— was established on April 11, 1919 as an affiliate of the League of Nations and recognised in 1946 by the U.N. as a specialised agency. The purposes of I.L.O. are—to contribute to the establishment of lasting peace by promoting social justice; to improve through international action, labour conditions and living standards; and to promote economic and social stability. *Headquarters* : I.L.O. Office, Geneva (Switzerland).

FOOD AND AGRICULTURAL ORGANISATION (FAO)—The chief aims of F.A.O. are—(1) to help nations raise the standards of living, (2) to improve nutrition of the peoples of all countries, (3) to increase the efficiency of farming, forestry and fisheries, (4) to better the condition of rural people and, through all these means, to widen the opportunity of all people for productive work. F.A.O. was founded on October 16, 1945, *Headquarters* : Viale delle Terme di Caracalla, Rome (Italy).

UNITED NATIONS EDUCATIONAL SCIENTIFIC AND CULTURAL ORGANISATION (UNESCO)—This organisation was established on November 4, 1946. Its purposes are to help combat illiteracy, raise living standards through education, promote collaboration among the nations through education, science and culture in order to further universal respect for justice, for the rule of law and for human rights and fundamental freedoms without the distinction to age, sex, language, or religion. *Headquarters* : Unesco House, Paris (France).

INTERNATIONAL CIVIL AVIATION ORGANISATION (ICAO)—became a permanent body in 1947. Making it safer and easier to fly from one country to another is the objective of the International Civil Aviation Organisation. It encourages the use of safety measures, uniform regulations for the operation of air services and simpler customs, immigration and public health procedure at international methods and equipment. *Headquarters* : International Aviation Building, Montreal (Canada).

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT (BANK)—was established on December 27, 1945. Making loans for reconstruction and economic developments schemes and helping to swell the flow of investment from one country to another are among the functions of the International Bank for Reconstruction and Development. *Headquarters* : 1818 H. St., N.W., Washington 25, D.C.

INTERNATIONAL MONETARY FUND (FUND)—to promote international monetary co-operation and expansion of international trade; to assist in the establishment of the multi-lateral system of payments in respect of current transactions between members. *Headquarters* : 19 and H Streets, N.W., Washington 25, D.C.

INTERNATIONAL DEVELOPMENT ASSOCIATION (IDA)—is another affiliate of the International Bank, which came into existence on September 24, 1960. IDA makes loans on terms more flexible than those for more conventional loans, for important development projects in under-developed countries, irrespective of whether the project so assisted is revenue-producing or directly productive. *Headquarters* : 1818 H. Street, N.W., Washington 25, D.C.

INTERNATIONAL FINANCE CORPORATION (IFC)—was formed in July, 1956 to promote economic development by aiding in private enterprise in member countries, particularly in the less developed areas; and to invest in new or existing enterprises in conjunction with private capital without Government guarantee. The IFC became a specialised Agency of the U.N. on February 20, 1957. It is affiliated with International Bank but has its own funds. *Headquarters* : 1818 H. Street, N.W., Washington 25, D.C.

INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)—

The Agency came into being on July 29, 1957. The purpose of IAEA is to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world and to ensure, as far it is able, that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose. *Headquarters* : Kearnntnerring 11-13,, Vienna 1 (Austria).

WORLD HEALTH ORGANISATION (WHO)—helps nations to make the world a healthier place to live in. It works to prevent disease spreading from one country to another. It helps nations stamp out mass diseases like malaria and tuberculosis and to build up public health service. It came into being on April 7, 1948, *Headquarters* : Palais des Nations, Geneva (Switzerland).

UNIVERSAL POSTAL UNION (UPU)—The purposes of UPU are to assure the organisation and perfection of the various postal services and to promote the development of international collaboration. To this end, member countries are united in a single postal territory for the reciprocal exchange of mail. It was established on July 1, 1875 by the Universal Postal Convention at Berne, Switzerland. *Headquarters* : Caisse Postale, Berne (Switzerland).

INTERNATIONAL TELECOMMUNICATION UNION (ITU)—is a technical and administrative body for the development and improvement of world-wide communications. The organisation is concerned with the improvement of communications equipment and the wider use of telecommunication services and facilities. One of its chief functions is to bring order into the use of radio frequencies. It was established at Paris in 1865. *Headquarters* : Palais Wilsons, Geneva (Switzerland).

WORLD METEOROLOGICAL ORGANISATION (WMO)—To develop weather-forecasting services through international collaboration and make possible the rapid inter-change of weather information is the function of the World Meteorological Organisation. It came into existence on March 23, 1953. *Headquarters* : 41 Avenue Guiseppe-Motta, Geneva (Switzerland).

INTER-GOVERNMENTAL MARITIME CONSULTATIVE ORGANISATION (IMCO)— was established on March 17, 1958 as a specialised body to deal with international shipping. The Agency provided the means for international co-operation in technical aspects of world shipping. It encourages the highest standards of maritime safety, considers Government shipping restrictions, studies unfair practices in international shipping and provides for exchange of maritime information among Governments. *Headquarters* : Chancery House, Chancery Lane, London W.C. 2.

INTERNATIONAL TRADE ORGANISATION (ITO)—The Interim Commission for International Trade Organisation was set up in 1948 to prepare for the creation of I.T.O. In 1950, it became evident that the creation of I.T.O. would be indefinitely postponed. The small staff of ICITO, however, continued to supply services for the contracting parties to the General Agreements on Tariffs and Trade. The intention to create ITO has been abandoned, but its work in the field of commercial

policy is being undertaken to a large extent through the co-operation of GATT. *Headquarters* : Palais des Nations, Geneva (Switzerland).

UNITED NATIONS CHILDREN'S FUND (UNICEF)— was established by the U.N. in 1946 to meet the emergency needs of children, particularly in war-devastated countries. UNICEF is not a specialised Agency, but a subsidiary body of the General Assembly reporting to the Economic and Social Council. It is now a permanent body with a fund made up of voluntary contributions from Governments and individuals, to help children all over the world. It works under the Economic and Social Council, *Headquarters* : at U.N., New York.

GENERAL AGREEMENT ON TARIFFS AND TRADE (GATT)— It is a multi-lateral agreement through which 50 contracting parties (full members), including all the leading trading countries, co-operate in the reduction of trade barriers and in the solution of international trade problems. Some 23 countries, in addition, have various forms of provisional or associate membership. *Headquarters* : Palais des Nations, Geneva (Switzerland).

UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES (UNHCR)— The Office of the United Nations High Commissioner for Refugees is an integral part of the United Nations. It came into existence on January 1, 1951. The task of the UNHCR is of a social and humanitarian and, therefore, of non-political nature. Its role is to promote, organise, co-ordinate and supervise international action on behalf of the refugees under the High Commissioner's mandate. *Headquarters* : Palais des Nations, Geneva (Switzerland).

POLITICAL INFORMATION

POLITICAL TERMS & DEFINITIONS

Abdication— Normally the process of relinquishing the throne of a sovereign ; the act may be voluntary.

Agent Provocateur— A French term for a political agent sent during political or social conflicts into the adversary's ranks to provoke in the guise of an adherent, incidents and compromising actions.

Aide-memoire— Manual of formulate etc. to serve as aid to the memory ; in diplomatic use, memorandum.

Ambassador— High-ranking minister representing his government in a foreign country.

Amnesty— Pardon granted by sovereign or State for an offence, specially one of a political character.

Anarchism— A political doctrine which holds that every form of Government is evil. The anarchists want to do away with all forms of State and Government and substitute for them free associations of individuals or groups without any coercive organisation, without written law, police courts, prisons or armed forces.

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Anti-Semitism—means opposition to the Jewish race. The movement became conspicuous in Europe during the last quarter of the 19th century. The movement appears to be based on economic rather than on religious or political cause.

Apartheid— is a South African word, literally meaning the separation of the black from the white races in South Africa. The process is also known as *segregation* (literally, separated from the black). It affects the movements of non-whites, restricting their choice of residence, property, choice of occupation and marriage. It is to-day the policy of the governing National Party of South Africa.

Appeasement— A policy of making concessions to an aggressor (originally that of Neville Chamberlain in 1938-39).

Armistice— Cessation of hostilities by agreement between belligerents. It may be either temporary for the purpose of removing the wounded or burying the dead or it may be preliminary to a general peace.

Autarky— is the idea that a country should produce everything it requires and so cut down foreign imported goods.

Authoritarian— A term denoting a dictatorial system of government.

Autocracy— Absolute rule by one man.

Autonomy— In political sense, limited self-government, short of independence. The objective test of autonomy is recognition that the group may legislate for itself.

Balance of Power— This phrase means the preservation of an equality of strength between countries or groups of countries. The idea is that no country shall become too powerful for the safety of the others.

Ballot Box— Sealed black box into which ballot papers are inserted at a parliamentary or local government election.

Bicameral System— That form of Government which consists of two separate Houses or Chambers and in which the concurrence of both is necessary to the enactment of legislation; adopted to act as a check upon hasty, or ill-considered legislation.

Bill— Form in which the proposed legislation is introduced in the Parliament. This may also be promoted by private members.

Biological Warfare— Warfare in which living organisms, specially disease germs, are used against human, animal and plant life; also warfare involving the use of synthetic chemicals against plants.

Blitz— Quick, violent, campaign intended to bring speedy victory; intensive air-attack.

Bloc— means an association of legislative members or of political parties or groups, formed to support a certain measure or ministry.

Blockade— a term used in international law for the prevention of goods entering or leaving an enemy country by land or sea. Neutral States are affected most by a blockaded country, they and their cargoes are liable to be confiscated by the blockading force.

Blue Book— a popular name for an official report, statistical or other.

government publication which, because of its bulk, is provided with a blue cover of stouter quality than the inside pages.

Bolshevism— accepts the doctrine that an irreconcilable antagonism exists between the propertied class or bourgeois and the property-less workers. It invites as inevitable and necessary class war, the object of which is the destruction of all classes, except the proletariat, in whose interest and by whom future society will be organised and governed on a communistic basis.

Bourgeois— a French word for the 'citizen class'. A term used by Marxist socialists to mean manufacturers, merchants and people with a business of their own, as opposed to the proletariat who earn a living only by selling their labour.

Brainwashing— means the forcible replacement of one set of political ideas by another set, specially through indoctrination or mental torture.

Budget— Review of public income and expenditure and the proposals for raising revenue for public services.

Buffer State— a small State established or preserved between two greater States to prevent direct clashes between them.

Bureaucracy— Government by an elaborate system of administrative departments and officials, which generally tends to become unwieldy and laborious in its operation. It produces red tape or over-systematization. Its most frequently charged defects are rigidity, conservatism and spirit of routine.

Cabinet— a private room in which confidential advisers of a sovereign or chief ministers of a State meet; group of advisers or ministers.

Capitalism— The economic system founded on free enterprise and private ownership of the means of production and distribution of goods.

Casting Vote— Right given to a person presiding at a meeting of a body of which he is a voting member, to exercise a second vote in the event of the meeting being equally divided on an issue.

Civil Disobedience— Political campaign refusing to co-operate with Government without, however, using violence.

Cold War— a struggle between two nations or groups of nations waged by use of political and economic strategy, propaganda and other measures short of armed combat.

Colony— a territory permanently settled by people from another land. A measure of internal self-government may be granted to a colony. It may then become responsible for its own social policy—labour, education or housing. But the mother country or colonial power still maintains the right to veto (forbid) acts passed by the local government.

Communism— The theory, as expounded by Marx and Engels, aims at the creation of a society in which the private ownership of land, factories, banks, trading houses, etc., is abolished and everyone receives what he needs and works according to his capacity. Communists believe that revolution and the use of force are justified to bring about the creation of such a society.

Condominium—a territory, the responsibility over which is shared by two administering powers.

Conscientious Objector— a person who refuses to enlist himself in the military service on moral or religious grounds.

Constituent Assembly— is an assembly converted for the purpose of drawing up a constitution, but it comes only—and this is the vital point—after there is a breakdown in the existing machinery of Government and a change has been brought about in the *status quo*.

Constitutional Monarchy— a system of Government where the king's political power is limited by the constitution; usually it means that real power of the country rests with the elected Parliament.

Contraband— goods or merchandise, the import or export of which is forbidden; in war time, applied specially as between neutrals and belligerents.

Corridor— a strip of the territory of one State running through that of another, usually to give access to the sea.

Coup d'état—applies to deliberate action to seize power, undertaken by a group of relatively minor authority; also applies to a bold measure of a Government to prevent supposed or actual danger.

Democracy— Form of Government in which sovereign power resides in the people as a whole, and is exercised either directly by them or by their elected representatives.

Dialectical— The theory propagated by Karl Marx and F. Engels, according to which political events are regarded as due to a conflict of social forces (the 'class struggle') produced by man's material needs, and history as a series of contradictions and their solutions.

Diarchy— Government by two rulers; system of provincial governments in India established by Government of India Act, 1919.

Dictatorship— Rule by one man who, in deciding what to do about internal or external affairs of the country he controls, does not have to consider or consult anyone but himself.

Dichards— extremely orthodox and unbending members of a party. It was specially applied to the members of the Conservative Party.

Diplomacy— Management of international relations by negotiation; skill in conduct of international intercourse.

Dollar Diplomacy— a nickname for the foreign policy of U.S.A., for expanding American financial and commercial interests abroad under the guise of promoting international friendship.

Dossier—Set or bundle of documents relating to a particular person or happening.

Electoral College— any body of electors limited in number, meeting in one place to choose a public official.

Embargo—Order forbidding ships of foreign power to enter, or any ship to leave, ports of a country.

Espionage— a French word which expresses more than the English word 'spying'; it implies an organised system.

Exchequer— Department of public service charged with receipt and custody of revenue.

Extradition— surrender of a fugitive from justice by one country or State to the authorities of another.

Extra-Territoriality— a legal fiction that foreign diplomats and diplomatic agencies are outside the country of residence in spite of physical presence. Embassies, etc., form foreign islands, so to speak, within the territory of a State. They are not subject to its laws.

Federation— a system of Government in which smaller States or the provinces of a State, hand over certain powers, such as foreign policy, defence, tariff to a Central Government, while controlling over some part of their internal affairs.

Fellow Traveller—one who sympathises with and, often, furthers the programme or ideals of a group (originally the Communist Party) without being a member of the group.

Fifth Column— secret supporters of an enemy engaged in sabotage or other subversive activities within defence lines.

Filibuster— an obstruction in legislative bodies.

Genocide— a calculated attempt to destroy systematically a racial, religious or political group; also an effort to destroy the language, religion, or culture of a group.

Gerrymander— a practice of laying out electoral districts in such a way as to ensure a majority of votes for the party in power.

Guerilla— an irregular warfare. Guerilla warfare means attacks upon a regular army by bands of irregular troops, usually by the inhabitants of an invaded country.

Hegemony— leadership; especially of one State or a group.

Imperialism— the policy of empire-building and conquests transcending national frontiers. It now means every policy of conquest and colonial expansion.

International Law—Body of rules regarded by the nations of the world as being binding on them in their relations with each other, in peace and war.

Internationals— the socialist movement in which socialists from many countries are united. There have been four such Internationals, and each has held several congresses. The *First International* accepted a programme drawn up by Karl Marx and lasted from 1866 to 1874. The *Second International*, in which there was trade union element, was organised in 1889 in Paris to celebrate the 100th anniversary of French Revolution. It sought to compass the aims of socialism by constitutional, not revolutionary, action and it held several congresses between 1882 and 1930. The *Third International* was organised in Moscow in 1919 by delegates from 12 countries to promote communism and support the Russian Revolution. It was dissolved in 1943. It declared in favour of establishing

communism by force. *Fourth International* was founded in 1936 by followers of Trotsky.

Iron Curtain—a barrier created by such means as censorship and prohibition of free travel to isolate Russian-controlled territories from outside contacts; hence, any similar barrier against communication.

Lame Duck—members of the legislature who fail to get re-elected but continue to function as legislators until the new legislature meets, are known as Lame Ducks. The term was first used in the United States.

Leftist—one who belongs to a radical or revolutionary party; also one who holds or advocates ultra-liberal principles.

Lend-Lease—the system of lending and leasing supplies and installations to each other, developed by the Allies in the World War II. It was started by President Roosevelt.

Marxism—the socialist doctrine following the theories of Karl Marx. His ideas are that all wealth is produced by the labour and should go to it. The labour is deprived of its fruits by the capitalists; so the workers must prepare for class war in which capitalism will be destroyed.

McMahon Line—is the Indo-Chinese border-line. The Line was drawn in 1914 at a British-Tibetan-Chinese Conference and named after a British administrator. Communist China, which has absorbed Tibet, repudiated the McMahon Line as delimiting her border with India. India insists that it is a legitimate and legal border-line.

Moratorium—a period during which no business engagements are completed or debts or liabilities enforced. A moratorium is declared by the Government in time of a financial crisis.

Nationalization—taking management by the State of trades and industries, etc., with or without compensation, i.e., changes from private to State ownership.

Neutrality—in international law, the condition of a State abstaining from participating in a war between other States and maintaining an impartial attitude in its dealings with the belligerent States, with the recognition of this impartiality by the warring States.

Non-aggression Pact—a treaty between two or more States pledging each not to attack the other and to settle their disputes by negotiation or arbitration.

Opposition—freedom to oppose the existing Government is fundamental to democracy and the British practice of calling the Opposition 'His Majesty's Opposition' on the analogy of 'His Majesty's Government' is a recognition of that the Opposition is as loyal and essential to the State as the Government.

Ordinance—that which is ordained by authority. Ordinance is an act promulgated by the Chief of the State without carrying it through the legislature of the country.

Pacifism—opposition to war or military force in any form. Pacifists believe that all international disputes should be settled by arbitration. Various movements towards world peace are not necessarily wholly pacifistic, as they often advocate defensive war and oppose only aggressive war.

Plebiscite— a direct vote by the voters of a country or district on a specific question. In the usual election, the people vote for or against the Government on all the policies for which it stands; in a plebiscite or referendum, they vote only on one particular question.

Plural Voting— the system of allowing a person to cast more than one vote in the same election. The voter is eligible to vote in more than one constituency by virtue of its special position, *i.e.*, a city and a university vote by the same person.

Politbureau— the shortened form of *Political Bureau*, which is the leading body of communist parties. The communist party of Soviet Union has a Politbureau which is regarded by many as the real Government of Russia. Every communist party in whatever country has a Politbureau.

Privileges. Parliamentary— The some of peculiar rights enjoyed by each House collectively as a constituent part of the High Court of Parliament, and by members of each House individually, without which they could not discharge their functions and which exceed those possessed by other bodies or individuals."—*Ersikine May*.

Privy Purse— in England, allowance from civil list for personal use of the Sovereign.

Prize Court— This is a court of law set up in time of war to decide whether a ship and its cargo captured by the navy is a lawful prize or not. If it is decided that a captured ship is enemy property or a cargo is contraband, they are sold and the proceeds thereof are distributed among all members of the navy at the end of the war.

Proletariate— the wage-earning class of a community collectively, *i.e.*, property-less class dependent on the sale of labour. In Marxism, the proletariate is opposed to bourgeois, the employing class, and will eventually overthrow it.

Proportional Representation— is the method used in an election by which the votes are so counted that each party has representation in the elective body in proportion to its strength, so as to ensure the representation of minorities.

Protocol— the rough draft of a diplomatic document, on which diplomatic transactions tentatively commence.

Quislings— local traitors, named after the Norwegian traitor, Major Quisling, who betrayed his country to the Germans; specially those who quietly prepared the way for Germany to her neighbouring countries.

Racism— the assumption that certain races are naturally superior to others; also any doctrine based on such an assumption.

Reds— a slang term for revolutionaries, specially communists; derived from Red Flag, the traditional symbol of revolt.

Republic— a country where the Head of the State is a President and not a King.

Residuary Powers— in federal constitution where the powers are divided between the federal Centre and the federating States or units under a system of three lists—federal, State or provincial and concurrent. Powers

relating to new spheres of administration not covered by either of the three lists are known as *residuary powers*.

Sabotage— at first this word was confined in its meaning to malicious waste or destruction of an employer's property by workmen, as a means of enforcing demands in labour disputes. Now it is being applied more broadly, to define any malicious crippling or destruction of property, especially as practised by foreign secret agents or sympathisers for the purpose of damaging military equipment.

Sanctions— Coercive measures taken to ensure fulfilment of international treaty obligations. Sanctions were provided in the Covenant of the League of Nations against countries resorting to war in defiance of the Covenant. U.N. Charter also provides for sanctions, though it does not use the word 'sanctions'.

Satyagraha— Passive resistance to Government, non-violent disobedience, a policy of Mahatma Gandhi in India.

Scorched Earth— a wartime policy of destroying all resources when defending forces have to withdraw before the invaders.

Self-determination— means the principle that every distinct people or nation ought to have the right to determine the question of its independence, its form of Government and its political destiny.

Splinter Group— in politics, a group broken away from a larger, original organisation.

Straw Vote— Unofficial polling of public opinion.

Tammany Hall— a name given to the Democratic Party's organisation in New York City, which sprang from Tammany Society of 1805. One of the famous political machines of American history, it is very influential in New York and State politics, also in the Democratic Party.

Theocracy— a State governed by God or priests.

Total War— denotes the present form of war in which the distinction between combatants and non-combatants is fast disappearing.

Totalitarian— a belief in the complete centralization of government control under one political group and suppression of other parties.

Trusteeship— Administration by a member of the United Nations of an area not yet ready for self-government.

Ultimatum— final statement of demands, rejection of which by opposite party is assumed to lead at once to breaking-off friendly relations and to declaration of war.

Underground— Organised, secret opposition to a government or force in power.

Unilateral action— action taken by one party to an agreement without consulting the other parties in international affairs.

Veto— Prohibition of proposed or intended act; exercise of constitutional right to prohibit passing or putting in force of an enactment or measure. In the United Nations, only the five permanent members out of the eleven members of the Security Council have the power of *veto*.

which prevents a decision being taken even if every other member is in favour of it.

Welfare State— a State that by its concern with public health, insurance against sickness and unemployment and similar measures, assumes a large share of responsibility for the welfare of its citizens.

Whip— a member of a political party assigned to the task of rounding up members of that party to ensure their votes and to hold them in line with the party policy.

White Paper— is a colloquial term for a government report, statement of policy or similar documents, which are not of sufficient thickness to require the stout blue cover which is used for a Blue Book.

PLANS, TREATIES, ALLIANCES, CONFERENCES, ETC.

Anzus Treaty—was signed on Sept. 1, 1951, under which members acknowledge that an attack in the Pacific against any will involve all and agree to "act to meet the common danger." Members are : U.S., New Zealand and Australia.

Arab League— Arab States formed a Union by a pact signed in Cairo on March 22, 1945 for the purpose of maintaining Arab solidarity. The League consists of United Arab Republic (Egypt-Syria), Iraq, Jordan, Saudi Arabia, Lebanon, Yemen, Libya, Sudan and Tunisia. The League has customs and payments agreements.

Atlantic Charter— Declaration of 8 common principles in the national policies of U.S. and Great Britain, drawn up at a conference in mid-Atlantic on August 14, 1941 by Churchill and Roosevelt and endorsed by other nations then at war with Germany, Italy and Japan. It states (1) No aggrandisement, territorial or other. (2) No territorial changes without expressed wish of the people concerned. (3) Right of all people to choose the form of their own government. (4) Restoration of sovereign rights and self-government to those who have been forcibly deprived of them. (5) Access on equal terms to trade and to raw materials of the world. (6) Fullest collaboration among all nations in economic field. (7) Final peace of the whole world after destruction of Nazi tyranny.

Bandung Conference— the meeting of the representatives of 30 African and Asian nations held at Bandung, Indonesia on April 18-24, 1955. The aim was to promote economic and cultural co-operation and to oppose colonialism.

Benelux— This is the combination of three countries—Belgium, Luxemburg and the Netherlands, which have established a complete Customs Union among themselves. No longer are there any tariff barriers between these three countries. All three are now together called *Benelux*.

Central Treaty Organisation— is the outgrowth of the Baghdad Pact which set up the Middle East Defence Organisation. CENTO was formed in August, 1959 after Iraq, one of the five original members of MEDO, withdrew in March, 1959. The members are United Kingdom, Turkey, Pakistan, Iran and United States. Although it inspired the pact, the U.S. did not become a full member until July 28, 1958. The

pact's purpose is to provide shield on the northern tier of the Middle East against Soviet penetration.

Colombo Plan— This Plan began on July 1, 1951. It was a six-year plan of economic aid to South and South-East Asia agreed on at the British-sponsored Conference at Colombo in January, 1950 by Great Britain, Australia, Canada, Ceylon, India, New Zealand, Pakistan. Later, Malaya, Singapore, North Borneo, and Sarawak promised co-operation. Burma and Indonesia sent observers to meetings of the Consultative Committee in London. The Project would raise £1,368 million, helped by governments, raised by bank loans, contributions, etc., to support mills, powers plants, railways, irrigation, other capital goods, thus combating poverty and communism. United States is not a participant, but would consult on Point Four Funds in Asia. The International Bank for Reconstruction and Development would co-operate. The members are Australia, Burma, British Borneo, Cambodia, Canada, Ceylon, India, Indonesia, Japan, Laos, Malaysia, Nepal, New Zealand, Pakistan, United Kingdom, United States (Associate) and S. Vietnam.

Comicon— Counterpart of European Common Market, started in the communist countries.

Common Market— This is an agreement (known as *Treaty of Rome*, and also as *European Economic Community*) between six European nations : France, West Germany, Italy, Belgium, Luxemburg and the Netherlands, to abolish all economic barriers among themselves by 1970. Discussions were held at Messina, Sicily in 1955 and a treaty was signed at Rome on March 25, 1957 setting up the European Economic Community. The broad object is progressively to remove all the economic and trade effect of their political frontiers and to create a single market with one common external tariff system. This means also complete freedom of travel and eventual employment for people within this group of nation and the dovetailing of policies on all state matters. It is almost a United States of Europe in its scope.

Commonwealth— The Commonwealth is a free association of sovereign independent States of the United Kingdom, Canada, Australia, New Zealand, Ceylon, Malaysia, Sierra Leone, Jamaica, Trinidad and Tobago, Malawi, Uganda, Malta and Gambia and the Republics of India, Pakistan, Ghana, Cyprus, Nigeria, Kenya, Tanzania and Zambia.

The total area of the Commonwealth is estimated to be about 14 million sq. miles. The total population of the Commonwealth was estimated in 1964 at 755,000,000. The Commonwealth has no written constitution but its members are bound together by a community of ideals and interest. At the head of each of the Parliaments of the Commonwealth (except those of Malaysia, Uganda and the Republics) is the Queen, in whose name the administration is carried on. In all those countries, the Queen is represented by the Governor-General, appointed by the Queen on the recommendation of the government of the country concerned.

Council of Europe— It was established in 1949 as a forum for discussion of European problems. It has 15 members, consisting of inner

'six', Britain, Ireland, Norway, Denmark, Iceland, Greece, Turkey, Austria and Sweden.

Dumbarton Oaks Conference—A meeting of the representatives of U.S.A., Great Britain, Russia and China held at the estate known as Dumbarton Oaks in Washington, recommending on Oct. 9, 1944, the creation of the United Nations, an international security organisation.

Eastern Military Alliance—It is the military organisation of communist States in Europe to offset North Atlantic Treaty Organisation (NATO), the Western Military Alliance.

European Atomic Energy Community (EURATOM)—set up in 1958 to give European community powerful nuclear industry for peaceful uses.

European Coal and Steel Community (ECSC)—Common markets in coal and iron ore were formally opened in February, 1953, and in steel in April, 1953 by Belgium, France, Germany (Federal Republic), Italy, Luxemburg and Netherlands.

European Economic Community—See *Common Market*.

European Free Trade Association (EFTA or Outer Seven)—set up in 1959 by Stockholm Treaty. A loose grouping of seven countries : Austria, Denmark, Norway, Portugal, Sweden, Switzerland and United Kingdom. Finland is an associate member. The primary object of EFTA is to establish free trade in industrial products among its members. Individual members continue to follow their own commercial policy towards outsiders.

Four Freedoms—President Roosevelt in his address to the Congress on Jan. 6, 1941, defined four essential human freedoms—(1) Freedom of speech and expression, (2) Freedom of every person to worship God in his own way, (3) Freedom from want, (4) Freedom from fear. The programme was, substantially, incorporated in the Atlantic Charter (Aug. 1947).

Fourteen Points—The formulation of peace programme presented by U.S. President Woodrow Wilson on Jan. 8, 1918, in a message to American Congress for an equitable and enduring peace in settlement of World War I.

General Agreement on Tariffs and Trade (GATT)—is a multi-lateral agreement through which 50 contracting parties (full members) including all the leading trading countries, co-operate in the reduction of trade barriers and in the solution of international trade problems. Some 23 countries, in addition, have various forms of provisional or associate membership. Under GATT, there have been five main Tariff Conferences in 1947, 1949, 1951, 1956 and 1960-61, through which rates of import duties on tens of thousand of items have been reduced or bound against increase.

International Red Cross—Two international organisations are known respectively as International Committee of the Red Cross and the League of Red Cross Societies, both with headquarters in Geneva, Switzerland. The first of these is a wholly international agency unconnected with any national society, which attempts to maintain the basic Red Cross prin-

ciples of the Geneva Convention ; the second agency is a federation of autonomous national Red Cross Societies designed to further co-operation among them.

Marshall Plan—On June 5, 1947, the U.S. Secretary of State, General Marshall, described that hunger, poverty, desperation and chaos existed in many parts of Europe and declared that, if Europe was to be saved, the United States should extend co-ordinated, not piecemeal, aid. This aid should not be a palliative, but a cure. The U.S. could not itself draw up a plan for European reconstruction, but if the nations of Europe could get together, the U.S. ought to support it as much as practicable.

North Atlantic Treaty Organisation (NATO)— was drawn up in 1948 and signed at Washington on April 4, 1949, by the foreign ministers of Belgium, Canada, Denmark, France, Iceland, Italy, Luxemburg, Netherlands, Norway, Portugal, United Kingdom and United States. Greece and Turkey became members of the Organisation in 1952 and German Federal Republic in 1955. They are determined to safeguard the freedom, common heritage and civilisation of their peoples, founded on the principles of democracy, individual liberty and the rule of law. The parties consider that an armed attack against one or more of them in Europe or North America shall be considered as an attack against them all.

Organisation of American States (OAS)— In September 1947, eighteen Latin American countries (Nicaragua and Ecuador were excluded) and the United States signed at Rio de Janeiro the *Rio Treaty* under which all signatories agreed to protect against aggression every state in the Western Hemisphere. In April 1948, all the 21 American nations (Canada not included) joined in the OAS to implement the Rio Treaty and form a collective security system. The members are : Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Rep., Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, U. S. A., Uruguay and Venezuela.

Pan-American Union— an international body created by the 21 American Republics, was founded in 1890 as the International Bureau of American Republics. A general conference known as *Pan-American Conference* of the member Republics is held quinquennially. The Union is financed by its 21 members on the basis of population.

Philadelphia Charter—was adopted by the International Labour Organisation at the Philadelphia Conference on May 10, 1944. It declares : that labour is not a commodity ; that freedom of expression and of association is essential to sustained progress ; that poverty anywhere constitutes a danger to prosperity everywhere ; and that war against want requires to be carried on with unrelenting vigour within each nation.

Point Four— On Jan. 20, 1949 President Truman outlined four major courses of action for American foreign policy. The fourth point from which the programme took its name, called upon the peoples of the United States "to help the free peoples of the world through their own efforts to produce more food, more clothing, more materials for housing and more mechanical power to lighten their burdens.....It must be a wide world effort for achievement of peace, plenty and freedom." Point Four is meant to make the scientific and technical knowledge of U.S.A. available

to free nations for their agricultural and industrial development. In Sept., 1950, funds became available for a Technical Co-operation Programme.

South-East Asia Treaty Organisation (SEATO)—was signed in Manila on Sept. 8, 1954. If any country within the area designated by the treaty is threatened by an armed attack, the members must consult together about measures to be undertaken. They cannot, however, intervene unless expressly invited to by that country. Members are : United States, Britain, France, New Zealand, Australia, Thailand, Pakistan, and Philippines.

Versailles, Treaty of—the peace treaty, ending the war of 1914-19, concluded between the Allies and Associated Powers and Germany on June 29, 1919. It imposed terms on Germany in regard to the occupation of Rhineland territory for a period of years, the surrender of Alsace-Lorraine to France and parts of East Prussia to Poland, the handing over to the Allies of Germany's colonial possessions. An important feature of this Treaty was the establishment of the League of Nations.

Warsaw Pact—the mutual defence treaty signed by the several communist countries—U.S.S.R., Bulgaria, Albania, Czechoslovakia, Poland, East Germany, Hungary and Rumania on 14th May, 1955 at Warsaw. The alliance was made necessary by the remilitarization of West Germany under Paris Pacts of 1954. The treaty is binding for 20 years but provides for its lapse as soon as an East-West collective security should come into force. A unified military command was also set up.

Western European Union (W.E.U.)—It was formally inaugurated on May 6, 1955 and comprises U.K., Belgium, France, Germany (Federal Republic), Italy, Luxemburg and Netherlands. It originated for economic, social and cultural collaboration and collective self-defence.

ABBREVIATIONS FOR INTERNATIONAL ORGANIZATIONS

AID	Agency for International Development (USA)	CERN	European Organization (formerly Council) for Nuclear Research
AMGOT	Allied Military Govts. of Occupied Territory	COMECON	(East European) Council for Mutual Economic Assistance
ANZUS	Australian, New Zealand and U.S. Defence Pact (Pacific Security Treaty)	ECA	(U.N.) Economic Commission for Africa
BIS	Bank for International Settlements	ECAFE	(U.N.) Economic Commission for Asia and Far East
CARE	Co-operative for American Remittances Everywhere	ECE	(U.N.) Economic Commission for Europe
CENTO	Central Treaty Organization	ECLA	(U.N.) Economic Commission for Latin America

POLITICAL INFORMATION

ECM	European Common Market	ICFTU	International Confederation of Free Trade Unions
ECOSOC	(U.N.) Economic and Social Council	IDA	International Development Association†
ECSC	European Coal and Steel Community	IFC	International Finance Corporation*
EDC	European Defence Community	ILO	International Labour Organization*
EEC	European Economic Community (Common Market)	IMCO	Intergovernmental Maritime Consultative Organization*
EFTA	European Free Trade Association	IMF	International Monetary Fund*
ELDO	European Launcher Development Organization	IRO	International Refugee Organization†
EMA	European Monetary Agreement	ITU	International Telecommunication Union*
ENEA	European Nuclear Energy Agency	LAFTA	Latin American Free Trade Association
ESRO	European Space Research Organization	MEDO	Middle-East Defence Organization
EURATOM	European Atomic Energy Community	NATO	North Atlantic Treaty Organization
FAO	Food and Agriculture Organization*	OAS	Organization of American States
GATT	General Agreement on Tariffs and Trade	OAU	Organization of African Unity
IADB	Inter-American Development Bank	ODECA	Organization of Central American States (<i>Organizacion de Estados Centro Americanos</i>)
IAEA	International Atomic Energy Agency†	OECD	Organization for Economic Co-operation and Development
IATA	International Air Transport Association	OEEC	Organization of European Economic Co-operation
IBRD	International Bank for Reconstruction and Development*	ONUC	United Nations Operation in the Congo
ICAO	International Civil Aviation Organization*	OPEC	Organization of Petroleum Exporting Countries
ICEM	Intergovernmental Committee for European Migration.		

RCD	Regional Co-operation for Development (Pakistan-Persia-Turkey)	UNFICYP	United Nations Peace-Keeping Force in Cyprus
SACEUR	Supreme Allied Commander, Europe	UNHCR	United Nations High Commissioner for Refugees
SACLANT	Supreme Allied Commander, Atlantic	UNICEF	United Nations Children's Emergency Fund
SEADO	South-East Asia Defence Organization	UNO	United Nations Organization.
SEATO	South-East Asia Treaty Organization		
SHAPE	Supreme Headquarters of Allied Powers in Europe (U.N.) Technical Assistance Board	UNRWA	United Nations Relief and Works Agency for Palestine Refugees
TAB		UNTSO	United Nations Truce Supervision Organization in the Middle East
UAMCE	Afro-Malagasy Union for Economic Co-operation		
UNCAFE	United Nations Commission for Asia and Far East†	UPU	Universal Postal Union*
UNCURK	United Nations Committee for the Unification and Rehabilitation of Korea	WCC	World Council of Churches
UNEF	United Nations Emergency Force in the Middle East	WEU	Western European Union
UNESCO	United Nations Educational, Scientific & Cultural Organization*	WFTU	World Federation of Trade Unions
		WHO	World Health Organization*
		WMO	World Meteorological Organization*

SOME IMPORTANT POLITICAL PARTIES

Parties in U.S.A.—There are no fundamental differences between two major political parties of the United States—the *Republican* and the *Democratic*. Strictly speaking, two parties cannot be exactly classified under the left and the right pattern and there are conservatives as well as progressive Republicans, as there are conservatives and progressive Democrats. *Republican Party* under Abraham Lincoln's leadership in the nineteenth century, abolished slavery. *Democratic Party*, in the present century, has tended to represent itself as the party of the small man and of social reforms. It is a supporter of civil rights for Negroes.

Kuomintang—the Chinese Nationalist Party, formed originally by the followers of Sun Yat-Sen in 1905. The party has now been driven out from the mainland of China by the communists and is now confined to the island of Formosa only.

*U.N. Specialized Agency

†Under aegis of U.N. but not a Specialized Agency

‡Affiliated to International Bank.

Conservative Party—one of the three chief political parties of England. It is the successor of the Tory Party of the 18th and 19th centuries. Traditionally the *Tories* were the parties of the squire and the parson as opposed to the *Whigs*, the forerunners of the Liberals, who though led by a group of great land-owning families, drew their support mainly from the business classes and non-conformists.

Labour Party—It is the British Socialist Party composed of trade unions, socialists and co-operative societies, which came into official existence in 1908. It aims at bringing about by legislation, changes which will benefit the poorer classes. Nationalization of basic industries and public utilities is the main programme of the Party. The Party's policy is not based on Marxism—instead, it is derived from the ethical idealism of the labour co-operative and radical movements and the practical rationalism of Fabianism.

Liberal Party— Another party of England, which developed out of the Whig Party in the 19th century, stood for parliamentary reform, individual liberty, freedom of speech, of the press and of worship, for Laisser-faire and for international free trade. Towards the end of the 19th century, Liberal Party modified its views on Laisser-faire to ensure minimum living standards for the working class and laid the foundation of what we call today the 'welfare state.'

Falangists— the Spanish political party founded in 1933 ; based on fascism ; emphasized Spanish national tradition.

Communist Party—is the world organisation of Marxist socialists, which once operated through branch national parties very loosely affiliated to the Communist International or 'Comintern', later abolished by the order of Stalin. The 'International' has again been revived under the name of 'Cominform', which is said to be the Common Information Bureau of the Communist Parties in nine countries of Europe.

Fianna Fail—De Valera's radical Nationalist Party in Ireland.

INDIAN POLITICAL PARTIES

Indian National Congress— Its first session took place in Bombay in 1885. W. C. Bonnerjee was its first president. The object of the Indian National Congress as adopted in 1948, is "the well-being and advancement of the people of India and the establishment in India by peaceful and legitimate means of a Co-operative Commonwealth based on equality of opportunity and of political, economic and social rights and aiming at world peace and fellowship." The Congress advocates a democratic secular government with a welfare as the goal. A. I. C. C. has, in 1963, advocated 'democratic socialism'.

Proja Socialist Party— Organised in its present form in 1934, the Party moulds its policy with reference to the policy of Russia in international affairs, rather than according to the conditions obtaining in India. They follow orthodox international communist line. The Party's aim is "the organisation of the toiling masses in the struggle for the victorious anti-imperialist and agrarian revolution for complete national independence. for the establishment of a people's democratic State led

by the working class, for the realisation of the dictatorship of the proletariat and the building up of socialism according to the teachings of Marxism and Leninism."

Communist Party of India— formed by the fusion of the Socialist Party and the Kisan Mazdoor Proja Party. The Party declares as its objective the establishment of a democratic socialist society in India.

Revolutionary Communist Party of India— another Marxist party in India, which calls itself Leninist, and characterizes Congress as a bourgeois organization. It is anti-Soviet with Trotskyite leanings.

Samyukta Socialist Party— The P.S.P. and the Socialist Party led by Ram Monohar Lohia were merged into one and formed Samyukta Socialist Party on June 7, 1964.

Socialist Republican Party— was started by late Sarat Chandra Bose in 1948 with the object of attaining complete independence of India, free from all foreign influences. The setting up of a Socialist Republic on the linguistic basis and the establishment in the country of a Union of Socialist Republics are the main objects of the Party.

Revolutionary Socialist Party of India— preaches Marxist doctrine and wants to establish a socialist State in India through revolution.

Forward Bloc— came into existence in 1938 when Subhas Bose sought to rally leftists against the Congress orthodoxy. It favours a programme of direct action and repudiates all compromises. The Party's objective now is the establishment of a socialist State in India with complete severance of relations with the British Commonwealth.

Forward Bloc (Marxist)— This is a group which severed its connection with the parent body and formed a new party on January 23, 1950. The Desh Sevak Party of Punjab merged into it.

Scheduled Caste Federation— It was established by late Dr. B. R. Ambedkar. It has no political or economic platform. After partition, it changed its outlook.

Hindu Mahasabha— The aim of the Mahasabha is the protection and promotion of all that contribute to the advancement, strength and glory of Hindu Rashtra, Hindu culture and Hindu polity, and as a means to that end, to achieve Hindu Raj and re-establish the integrity of the State of Bharat by constitutional means.

Jan Sangh— was started by Dr. Shyama Prasad Mukherjee in 1951. It has some stronghold in Northern India. It has more or less the same objectives as Hindu Mahasabha. It wants that the Government of India should take a strong action against Pakistan. It also wants complete integration of Kashmir with India.

Peasants and Workers Party— The Party's programme includes "severance of all connection with British imperialism, abolition of landlordism without compensation, confiscation of foreign capital invested in banks and industries." The programme also urges nationalisation of big industries, banks and insurance companies and to perpetuate the present-day social injustice by believing in the re-organisation of States on a

linguistic basis. This is a Marxist-Leninist Party following the guidance of Cominform.

Rastriya Swayam Sevak Sangh— was started in 1925. Its objects are the military training for the Hindus, development of social consciousness and building up of character, and promotion of physical, intellectual and moral well-being of the Hindus and the establishment of Hindu Rashtra. The Party has now stated its main objective to be the revival of Hindu culture.

Akali Dal— A politico-religious party of a section of the Sikhs. It aims at the establishment of a Punjabi Suba as a homeland for the Sikhs within Indian Union and advocates the adoption of Gurumukhi language as a State language for the Punjab State.

Kishan Party— is a peasant movement with socialistic outlook. Its programme is the amelioration of the Indian peasants. Though separate from the Congress, its programme is identical with that of the Congress.

All-India Muslim Majlis— Progressive Nationalist Party of the Muslims, was opposed to creation of Pakistan and supports Congress ideals.

Jamiat-ul-ulema-Hind— an organisation of Moslem divines and religious teachers. It has always supported the political programme of the Congress. It was a supporter of Indian independence on religious grounds. It has now dropped its political programme.

Shia Political Conference—represents Shia Moslems and is the most important minority among the supporters of the Congress.

Momin Ansar Conference— Its main policy has centred on opposition to Muslim League and to Pakistan. The Conference is the full supporter of the Congress policies.

Swatantra Party— At the time of the formation of this Party, its sponsors declared—"Social justice and welfare can be reached more certainly and properly in other ways than through the techniques of the so-called socialism. We hold social justice and welfare should not be sought to be brought about by violence or State compulsion with all necessary accompaniments of injustice, expropriation and repudiation of obligations but must be brought about into being by the spread of doctrine of trusteeship adumbrated by Gandhiji.

Dravida Munnetra Kazhagam— a party of South India, consisting mainly of non-Brahmins, who are against the domination of North India and the superiority of the Brahmins.

PRESIDENTS OF U.S.A.

Name	Party	Name	Party
1789-97 G. Washington	Fed.	1829-37 Andrew Jackson	Dem.
1797-1801 John Adams	Fed.	1837-41 M. Van Buren	Dem.
1801-9 Thomas Jefferson	Rep.	1841 W. H. Harrison	Whig.
1809-17 James Madison	Rep.	1841-45 John Tyler	Whig.
1817-25 James Monroe	Rep.	1845-49 J. Knox Polk	Dem.
1825-29 John Quincy Adams	Rep.	1849-50 Zachary Taylor	Whig.

<i>Name</i>	<i>Party</i>	<i>Name</i>	<i>Party</i>
1850-53 M. Fillmore	Whig.	1897-1901 W. McKinley	Rep.
1853-57 Franklin Pierce	Dem.	1901-9 T. Roosevelt	Rep.
1857-61 J. Buchanan	Dem.	1909-13 William H. Taft	Rep.
1861-65 A. Lincoln	Rep.	1913-21 W. Wilson	Dem.
1865-69 Andrew Johnson	Rep.	1921-23 W. G. Harding	Rep.
1869-77 U. S. Grant	Rep.	1923-29 Calvin Coolidge	Rep.
1877-81 R. B. Hayes	Rep.	1929-33 H. C. Hoover	Rep.
1881- James A. Garfield	Rep.	1933-45 F. D. Roosevelt	Dem.
1881-85 Chester A. Arthur	Rep.	1945-53 H. S. Truman	Dem.
1885-89 G. Cleveland	Dem.	1953-61 D. D. Eisenhower	Rep.
1889-93 B. Harrison	Rep.	1961-63 J. F. Kennedy	Dem.
1893-97 G. Cleveland	Dem.	1963- Lyndon B. Johnson	Dem.

BRITISH PRIME MINISTERS

<i>Year of Appointment</i>	<i>Year of Appointment</i>
Sir R. Walpole (Whig.) 1721	Viscount Melbourne (Whig.) 1835
Earl of Wilmington (Whig.) 1742	Sir Robert Peel (Tory) 1841
Henry Pelham (Whig.) 1743	Lord John Russell (Whig.) 1846
Duke of Newcastle (Whig.) 1754	Earl of Derby (Tory) 1852
Duke of Devonshire (Whig.) 1756	Earl of Aberdeen (Peelite) 1852
Duke of Newcastle (Whig.) 1757	Viscount Palmerston (Lib) 1855
Earl of Bute (Tory) 1762	Earl of Derby (Con.) 1858
George Grenville (Whig.) 1763	Viscount Palmerston (Lib.) 1858
Lord Rockingham (Whig.) 1765	Lord John Russell (Lib.) 1865
Earl of Chatham (Whig.) 1766	Earl of Derby (Con) 1866
Duke of Grafton (Whig.) 1767	Benjamin Disraeli (Con.) 1868
Lord North (Tory) 1770	W. E. Gladstone (Lib.) 1868
Lord Rockingham (Whig.) 1782	Benjamin Disraeli (Con) 1874
Earl of Shelburne (Whig.) 1782	W. E. Gladstone (Lib) 1880
Duke of Portland (Coal) 1783	M'quess of Salisbury (Con) 1885
William Pitt (Tory) 1783	W. E. Gladstone (Lib) 1886
Henry Addington (Tory) 1801	M'quess of Salisbury (Con) 1886
William Pitt (Tory) 1804	W. E. Gladstone (Lib) 1892
Lord Grenville (Whig.) 1805	Earl of Rosebery (Lib) 1894
Duke of Portland (Tory) 1807	M'quess of Salisbury (Con) 1895
Spencer Perceval (Tory) 1809	A. J. Balfour (Con) 1902
Earl of Liverpool (Tory) 1812	Sir H. Campbell-Banner-
George Canning (Tory) 1827	man (Lib) 1905
Lord Goderich (Tory) 1827	H. H. Asquith (Lib) 1908
Duke of Wellington (Tory) 1828	H. H. Asquith (Coal.) 1915
Earl Grey (Whig.) 1830	D. Llyod George (Coal.) 1916
Viscount Melbourne (Whig.) 1834	A. Bonar Law (Con.) 1922
Sir Robert Peel (Tory) 1834	Stanley Baldwin (Con.) 1923

J. R. MacDonald (Lab.)	1924	W. S. Churchill (Con.)	1945
Stanley Baldwin (Con.)	1924	C. R. Attlee (Lab)	1945
J. R. MacDonald (Lab.)	1929	Sir W. S. Churchill (Con.)	1951
J. R. MacDonald (N. Govt.)	1931	Sir Anthony Eden (Con.)	1955
Stanley Baldwin (N. Govt.)	1935	Harold Macmillan (Con)	1957
N. Chamberlain (N. Govt.)	1937	Sir Alec Douglas-Home (Con)	1963
W. S. Churchill (Coal)	1940	Harold Wilson (Lab.)	1964

SALARIES OF THE HEADS OF GOVERNMENTS

President of U.S.A.	...	...	\$ 100,000 per year*
Prime Minister of U. K.	...	...	£ 10,000 per year
President of India	...	...	Rs. 10,000 per month†
Prime Minister of Japan	...	...	110,000 yen per month‡

RULERS OF FRANCE

<i>First Republic</i>		<i>Second Republic</i>	
National Convention	1792-1795	Louis Napoleon	1848-1852
Directory	1795-1799	<i>Second Empire</i>	
<i>Consulate</i>		Napoleon III	1852-1871
Napoleon Bonaparte	1799-1804	<i>Third Republic</i>	1871-1940
<i>First Empire</i>		<i>Vichy Government</i>	1940-1944
Napoleon I	1804-1815	<i>Provisional Govt.</i>	1944-1947
<i>Restoration of the House of</i>		<i>Fourth Republic</i>	1947-1959
<i>Bourbon</i>		<i>Fifth Republic</i>	
Louis XVIII	1814-1824	Charles de Gaulle	1959-
Charles X	1824-1830	(President)	
<i>House of Orleans</i>			
Louis Philippe	1830-1848		

RULERS OF GERMANY (Since World War I)

<i>Heads of the Third Reich</i>		<i>Presidents of Federal Republic</i>	
F. Ebert	1919-25	Theodor Heuss	1949-50
Paul Von Hindenburg	1925-34	Heinrich Luebke	1959-
Adolf Hitler	1934-45	<i>Chairmen of Democratic Republic</i>	
Karl Doeniz	1945-45	Wilhelm Pieck	1949-60
		Walter Ulbricht	1960-

Coal—Coalition ; Lab—Labour
Lib.—Liberal ; Con—Conservative

* Plus taxable \$50,000 for expenses and a non-taxable sum (not exceeding \$40,000 a year) for travelling and official entertainment expenses.
† Exclusive of allowances.
‡ With emoluments, etc.

HEADS OF THE GOVT. OF U.S.S.R.*(after Revolution)*

Nikolai Lenin	... 1917-24	Kliment Voroshilov	... 1953-60
Joseph Stalin	... 1924-53	Leonid I. Brezhnev	... 1962-64
		Anastas Mikoyan	... 1964-

RULERS OF GREAT BRITAIN*(House of Windsor)*

George V	... 1910-36	George VI	... 1936-52
Edward VIII	1936-36	Elizabeth II	... 1952-

POLITICAL ASSASSINATIONS

1865 Abraham Lincoln, President of U.S., April 14.	1918 Czar Nicholas II and his family, July 16.
1872 Earl of Mayo, Governor-General of India.	1919 Amir Habibullah of Afghanistan.
1876 Abdul Aziz, Sultan of Turkey, June 4.	1921 Dato, Premier of Spain ; Takashi Hara, Jap. Premier.
1881 Alexander II of Russia, Mar. 13 ; President Garfield of U.S., July 2.	1922 J. Narutowick, 1st President of Poland, Dec. 16 ; M. Collins, Premier of Irish Free State.
1894 Marie F. Sadi-Carnot, President of France, June 24.	1928 Ex-President Gen. Alvaro Obregon of Mexico, July 17.
1896 Nash-ed-Din, Shah of Iran.	1930 Premier Hamaguchi, Japan.
1898 Empress Elizabeth of Austria, Sept. 10.	1932 President Doumer, France ; Ki Inukai, Japanese Premier, May 31.
1900 Humbert I of Italy, July 29.	1933 Emir Faisal, King of Iraq. Sept. 9 ; Ion Duea, Rumanian Premier, Dec. 24 ; King Nadir Shah, Afghanistan.
1901 President McKinley of U.S., Sept. 6.	1934 Austrian Chancellor Dr. E. Dollfus, July 25 ; King Alexander I of Yugoslavia ; M. Barthow, French Foreign Minister.
1903 King Alexander and his wife Draga of Serbia.	1936 K. Takahasi, Finance Minister, Admiral Saito and Admiral Suzuki, Japan.
1905 Grand Duke Sergius, Russia.	1939 Rumanian Premier M. Calinescu.
1908 King Carlos & Crown Prince of Portugal.	1940 Leon Trotsky, Russian leader, August 21.
1909 Prince Ito of Japan.	1942 Admiral Darlan of France.
1911 Stolypin, Premier of Russia, Sept. 14.	1945 Mehar Pasha, Premier of Egypt, Feb. 24.
1912 Jose Canalojas, Premier of Spain.	
1913 Francisco L. Madero, President of Mexico and Jose P. Soares, Vice-President, Feb. 23 ; King George of Greece, Mar. 18.	
1914 Archduke Francis Ferdinand of Austria & his wife, June 28.	

- 1946 Ananda Mahidol, King of Siam, July 9.
- 1947 Gen. Aung San, Vice-President of Burma and five Cabinet Ministers.
- 1948 Mahatma Gandhi, Jan. 30; Count F. Bernadotte, U. N. Mediator, Sept. 17; Premier Nokrashy Pasha of Egypt.
- 1949 Syrian President Hosni Ziam, Aug. 14; Abdul Hussain, Persian ex-P.M., Nov. 4.
- 1950 C. Delgado Chalboud, President of Venezuela, Nov. 13.
- 1951 Ali Razmara, Premier of Iran, Mar. 7; King Abdullah of Jordan, July 20; Liaquat Ali Khan, Premier of Pakistan, Oct. 16.
- 1955 President Antonio Remon of Panama, Jan. 2.
- 1956 President Anastasio Somoza of Nicaragua, Sept. 21.
- 1957 Castillo Armas, President of Guatemala, July 26.
- 1958 King Faisal & Crown Prince of Iraq, Nuri-as-Said, Premier of Iraq, July 14.
- 1959 S. Bandarnayke, Premier of Ceylon, Sept. 25.
- 1960 Premier Hazza Majali of Jordan, Aug. 29; Dag Hammerskjold, Secy.-General of U. N., Sept. 18.
- 1961 Ex-Premier Patrice Lumumba of Congo, Jan. 17; Dominican Dictator Rafael Trujillo Molina, May 30.
- 1963 Abdel Karim Kassem, Premier of Iraq, Feb. 8; Ngo-Dinh Diem, President of South Vietnam, Nov. 1; J. F. Kennedy, U. S. President, Nov. 22.
- 1964 Jigme Dorji, Prime Minister of Bhutan, Apr. 5.
- 1965 Hassan Ali Mansur, Prime Minister of Iran, Jan. 26.

FAMOUS ABDICATIONS

	B.C.		A.D.
Sulla, Roman Dictator	79	Manuel (Portugal)	1910
Deocletian, Roman Emp.	305	Pu-Yi (China)	1912
Edward II (England)	1327	Nicholas II (Russia)	1917
Richard II (England)	1399	Constantine (Greece)	1917
Charles V (Germany)	1555	Ferdinand I (Bulgaria)	1918
Mary Queen of Scots	1567	William II (Germany)	1918
Christina (Sweden)	1654	A. D. Karl (Austria)	1918
James II (England)	1688	Mohammed VI (Turkey)	1922
Charles IV (Spain)	1808	George II (Greece)	1924
Napoleon I (France)	1814	Amanullah (Afghanistan)	1929
Louis Philippe (France)	1848	Alfonso XIII (Spain)	1931
Isabella II (Spain)	1870	Prajadhipak (Thailand)	1935
Amadeus I (Spain)	1873	Edward VIII (England)	1936
Prince Alexandar (Bulgaria)	1886	Zog I (Albania)	1939
Milan (Serbia)	1889	Carol II (Rumania)	1940
Oscar (Norway)	1905	Reza Shah Pehlavi (Iran)	1941
Abdul Hamid II (Turkey)	1909	Peter II (Yugoslavia)	1945
		Simeon (Bulgaria)	1946

Victor Emmanuel III (Italy)	1946	Talal I (Jordan)	1951
Umberto II (Italy)	1946	Farouk I (Egypt)	1952
Michael (Rumania)	1948	Ahmed Fouad II (Egypt)	1953
Wilhelmina (Netherlands)	1948	King Saud (Saudi Arabia)	1964
Leopold III (Belgium)	1951		

SOME FLAGS

Red Cross flag—is the most widely used flag of the Geneva Convention. It has a Red Cross against white background.

Red Crescent flag—with a white field, is the flag of the Geneva Convention. It is used in place of Red Cross flag in all Muslim countries except Iran.

Red flag—Once a signal for battle, now this name is given to communist and Soviet Russian flags.

Yellow flag—Flown on a ship with persons suffering from contagious or infectious diseases.

Red Lion flag—is the flag of the Geneva Convention in Iran. The flag has a white field.

United Nations Flag—White U. N. emblem (global map projected from the North Pole and embraced in twin olive branches) centred on a rectangular blue banner.

Old Glory—Flag of U.S.A.

Flag of distress—Flown upside down.

Pan-American Union Flag—Two pointed pennants.

Railway flags—A white flag denotes that line is clear, and the driver can go ahead, red is the danger signal and means 'no advance', and green signifies 'go slow'.

Black flag—is the emblem of piracy.

White flag—is a flag of truce or surrender.

RULERS OR HEADS OF THE COUNTRIES

Country	Executive Head	Premier
Afghanistan	Md. Zahir Shah, King.	Dr. Mohammed Yusuf, P. M.
Albania	Hadji Lechi, Head of State.	Gen. Edvar Hodja, P. M.
Algeria		Col. Houarie Boumedienne, P. M.
Argentina	Dr. Arturo Illia, P.	
Australia	Lord Casey, G. G.	Sir R. G. Menzies, P. M.
Austria	Franz Jonas, P.	Dr. Joseph Klaus, P. M.
Bahrein	Isa bin Sulman, Shaikh	
Bechuanaland		Seretse Khama, P. M.
Belgium	Baudouin, King	Pierre Tarmel, P. M.
Bhutan	Jigme Dorjee Wangchuk, King.	
Bolivia	Rene B. Barrientos, P.	
Brazil	H. Castelo Branco, P.	

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<i>Country</i>	<i>Executive Head</i>	<i>Premier</i>
British Guiana ...	Sir R. Luyt, <i>Governor</i>	Forbes Burnham, P.M.
Bulgaria ...	Georgi Traikov, P.	Todor Zhivkov, P. M.
Burma ...	Gen. Ne Win, <i>Chairman of the Council of Ministers</i>	
Burundi ...	Mwambutsa IV, <i>King</i>	Leopold Biha, P. M.
Cambodia ...	Kossamak Nearirat, <i>Queen</i>	Narodom Sihanouk, P. M.
Cameroon ...	Ahmadou Ahidjo, P.	
Canada ...	George P. Vanier, G.G.	Lester B. Pearson, P. M.
Central African Rep.	David Dacko, P.	
Ceylon ...	William Gopallawa, G. G.	Dudley Senanayake, P. M.
Chad ...	F. Tombalbaye, P.	
Chile ...	Eduardo Frei, P.	
China ...	Liu Shao-Chi, <i>Chairman</i>	Chou En-lai, P. M.
Colombia ...	Guillermo Valencia P.	
Congo (Brazzaville)	Masseмба-Debat, P.	M. P. Lissoulea, P. M.
Congo, Democratic Republic of ...	Joseph Kasavubu, P.	Evariste Kimba, P. M.
Costa Rica ...	F. J. Orlich, P.	
Cuba ...	Dr. O. D. Torrado, P.	Dr. Fidel Castro, P.M.
Cyprus ...	Archbishop Makarios, P.	
Czechoslovakia ...	A. Novotny, P.	Jozef Lenart, P. M.
Dahomey ...	S. M. Apithy, P.	
Denmark ...	Frederick IX, <i>King</i> .	Jens Otto Krag, P. M.
Ecuador ...	Ramon C. Jijon, P.	
Ethiopia ...	Haile Selassie I, <i>Emp.</i>	A. A. Wold, P. M.
Finland ...	Dr. Urho Kekkonen, P.	Reino Lehto, P. M.
Formosa ...	Chiang Kai-shek, P.	
France ...	Charles de Gaulle, P.	G. Pompidou, P. M.
Gaboon ...	Leon M'ba, P.	
Gambia ...	Sir John Paul, G. G.	David K. Jawara, P. M.
Germany (W) ...	Heinrich Luebke, P.	L. Erhard, <i>Chancellor</i>
Germany (E) ...	W. Ulbricht, <i>Chairman</i> .	Willi Stoph, P. M.
Ghana ...	Kwame Nkrumah, P.	
Greece ...	Constantine XIII, <i>King</i>	S. Stefanopoulos, P. M.
Gt. Britain ...	Elizabeth II, <i>Queen</i>	Harold Wilson, P. M.
Guatemala ...	Enrique P. Azurdia, P.	
Guinea ...	A. Sekou Toure, P.	A. Sekou Toure, P. M.
Haiti ...	Dr. F. Duvalier, P.	
Hungary ...	Istvan Dobi, P.	Gyula Kallai, P. M.

<i>Country</i>	<i>Executive Head</i>	<i>Premier</i>
Iceland	... Asgeir Asgeirsson, <i>P.</i>	H. Jonsson, <i>P. M.</i>
India	... Dr. S. Radhakrishnan, <i>P.</i>	Lal Bahadur Shastri, <i>P. M.</i>
Indonesia	... Dr. A. Soekarno, <i>P.</i>	Dr. A. Soekarno, <i>P.M.</i>
Iran	... Md. Reza Pahlavi, <i>Shah</i>	Amir Abdas Hoveida, <i>P. M.</i>
Iraq	... A. S. Mohammed Aref, <i>P.</i>	Dr. Abdel-Rahman Al-Bazaz, <i>P. M.</i>
Irish Republic	... Eamon de Valera, <i>P.</i>	Sean Lemass, <i>P. M.</i>
Ireland, Northern	...	Capt. Terence O'Neill, <i>P. M.</i>
Israel	... Zalman Shazar, <i>P.</i>	Levi Eshkol, <i>P. M.</i>
Italy	... Giuseppe Saragat, <i>P.</i>	Aldo Moro, <i>P. M.</i>
Ivory Coast	... F. Houphouet-Boigny, <i>P.</i>	
Japan	... Hirohito, <i>Emperor.</i>	Eisaku Sato, <i>P. M.</i>
Jordan	... Hussain I, <i>King.</i>	Wasfi al-Tell, <i>P. M.</i>
Kenya	... Jomo Kenyatta, <i>P.</i>	
Korea, N.	... Kim Du-bong, <i>P.</i>	Kim Il-Sung, <i>P. M.</i>
Korea, S.	... Pak Chung-Hi, <i>P.</i>	
Kuwait	... Abdullah-as-Subah, <i>Amir</i>	
Laos	... Setha Khatya, <i>King</i>	Souvanna Phouma, <i>P. M.</i>
Lebanon	... Charles Helou, <i>P.</i>	Rashid Karami, <i>P. M.</i>
Liberia	... W. V. S. Tubman, <i>P.</i>	
Libya	... Idriss I, <i>King</i>	M. Ahmed al Muntas- ser, <i>P. M.</i>
Luxemburg	... Jean, <i>Grand Duke</i>	Pierre Werner, <i>P. M.</i>
Malagasy	... M. P. Tsiranana, <i>P.</i>	
Malawi	...	Dr. Hastings K. Banda, <i>P. M.</i>
Malaysia	... Tunku Ismail, <i>K.</i>	Tunku A. Rahman, <i>P. M.</i>
Maldives	...	Ibrahim Nasir, <i>P. M.</i>
Mali	... Modibo Keita, <i>P.</i>	
Malta	...	Dr. Borg Olivier, <i>P. M.</i>
Mauritania	... M. O. Daddah, <i>P.</i>	
Mauritius	...	Dr. S. Ramgoolam, <i>P. M.</i>
Mexico	... G. Diaz Ordaz, <i>P.</i>	
Monaco	... Rainier III, <i>Prince</i>	
Morocco	... Hassan II, <i>King</i>	King Hassan II, <i>P. M.</i>
Muscat & Oman	... Said bin Taimur, <i>Sultan</i>	
Nepal	... Mahendra Bir Bikram Shah, <i>K.</i>	Surya Bahadur Thapa, <i>Chairman of the Council of Ministers.</i>

<i>Country</i>	<i>Executive Head</i>	<i>Premier</i>
Netherlands	Juliana, <i>Queen</i>	Dr. Joseph Cals, <i>P.M.</i>
New Zealand	B. Fergusson, <i>G. G.</i>	Keith Holyoake, <i>P. M.</i>
Nicaragua	Dr. R. S. Guttierrez, <i>P.</i>	
Niger	D. Hamani, <i>P.</i>	
Nigeria	Dr. N. Azikiwe, <i>P.</i>	Sir Abubakar T. Balewa, <i>P. M.</i>
Norway	Olav V, <i>King</i>	Per Borten, <i>P. M.</i>
Pakistan	M. Ayub Khan, <i>P.</i>	
Panama	D. M. A. Robles, <i>P.</i>	
Paraguay	Gen. A. Stroessner, <i>P.</i>	
Peru	Fernando B. Terry, <i>P.</i>	
Philippines	Fernandez Marcos, <i>P.</i>	
Poland	E. Ochab, <i>Chairman.</i>	J. Cyrankiewicz, <i>P. M.</i>
Portugal	A. D. R. Tomas, <i>P.</i>	Dr. A. O. Salazar, <i>P.M</i>
Rhodesia	Sir H. Gibbs, <i>Governor</i>	Ian D. Smith, <i>P. M.</i>
Rumania	Chibu Stoica, <i>P.</i>	Ion G. Maurer, <i>P. M.</i>
Salvador	Col. J. A. Rivera, <i>P.</i>	
Saudi Arabia	Faisal Ibn-Abdul Aziz, <i>K.</i>	
Senegal	L. Senghor, <i>P.</i>	
Sierra-Leone	Sir H. J. L. Boston, <i>G. G.</i>	Sir Albert M. Margai, <i>P. M.</i>
Singapur		Lee Kuan Yew, <i>P. M.</i>
Somalia	A. A. Osman, <i>P.</i>	A. H. Hussen, <i>P. M.</i>
South Africa	Charles R. Swart, <i>P.</i>	Dr. H. F. Verwoerd, <i>P. M.</i>
Spain	Gen. F. Franco, <i>Regent</i>	
Sudan	Ismail Al-Azhari, <i>P.</i>	M. A. Mahgoub, <i>P. M.</i>
Sweden	Gustav VI Adolf, <i>K.</i>	Tage Erlander, <i>P. M.</i>
Switzerland	Ludwig Von Moos, <i>P.</i>	
Syria	Md. Amin-al-Hafez, <i>P.</i>	Dr. Y. Zouayen, <i>P. M.</i>
Tanzania	Julius Nyerere, <i>P.</i>	
Thailand	Bhumibol Adulyadej, <i>K.</i>	T. Kittikachorn, <i>P. M.</i>
Togo	N. Grunitsky, <i>P.</i>	
Tunisia	Habib Bourguiba, <i>P.</i>	
Turkey	Cemal Gursel, <i>P.</i>	S. Demirel, <i>P. M.</i>
Trinidad & Tobago		Dr. E. Williams, <i>P. M.</i>
U.A.R.	Gamal A. Nasser, <i>P.</i>	Z. Mohieddin, <i>P. M.</i>
Uganda		Dr. M. Obote, <i>P. M.</i>
Upper Volta	M. Yameogo, <i>P.</i>	
Uruguay	A. Z. de San Martin, <i>P.</i>	
U.S.A.	Lyndon B. Johnson, <i>P.</i>	
U.S.S.R.	Anastas Mikoyan, <i>Chairman, Presidium. Supreme Soviet.</i>	Alexei Kosygin, <i>Chairman, Council of Ministers.</i>
Vatican City	Paul VI, <i>Pope</i>	
Venezuela	Dr. Raúl Leoni, <i>P.</i>	

<i>Country</i>	<i>Executive Head</i>	<i>Premier</i>
Viet-Nam (N) ...	Ho Chi Minh, <i>P.</i>	Pham Van-Dong, <i>P.M.</i>
Viet-Nam (S) ...		Nguyen Cao Ky, <i>P. M.</i>
Yemen ...	Abdullah Sallal, <i>P.</i>	Hassan el Amari, <i>P.M.</i>
Yugoslavia ...	Josip Broz Tito, <i>P.</i>	Peter Stambolic, <i>P. M.</i>
Zambia ...	Kenneth Kaunda, <i>P.</i>	

WORLD GAZETTEER

(A BRIEF GUIDE TO THE COUNTRIES OF THE WORLD)

AFGHANISTAN— a mountainous Moslem kingdom, lying between Pakistan, Iran and USSR. Afghanistan runs all the way from Iran eastward to China and forms a long barrier between USSR and Pakistan. Towering above Kabul are the Hindukush mountains. There are no railways and navigable rivers. Rough mountains have prevented the building of rail-roads.

The Government is constitutional monarchy. The Cabinet comprises the Prime Minister, the President of the National Assembly and Ministers. On Sept. 20, 1964, a new constitution was approved by the Grand Assembly. A new Parliament, consisting of an elected Lower House and partly-elected Upper House, was opened on October 14, 1965. The predominant religion in the country is Islam. Pushtu and Persian are the principal languages.

Agriculture and sheep-rearing are the main livelihood of the people. Chief exports are wool and skins. Area : 250,000 sq. m. Population—14,684,000. Capital—*Kabul*.

ALBANIA— a mountainous Balkan Communist republic in southern Europe bounded by Yugoslavia, Greece and the Adriatic Sea. It was incorporated with Italy in 1939 but was proclaimed a republic in Jan., 1946 by the Communists. Under 1945 Constitution, Albania has a typical Soviet-type Government. Supreme power is vested in the popularly elected National Assembly, to which the Cabinet, headed by the Premier, is responsible. It is an agricultural country, the staple crops being wheat and maize. Area : 10,629 sq. m. Population—1,778,100. Capital—*Tirana*.

ALGERIA— annexed in Feb. 1842 and regarded as an integral part of France, it became independent on July 3, 1962. It is situated in northern Africa. Cattle raising is the mainstay of the people. There are large deposits of iron, zinc, lead, mercury, copper and antimony. Export consists chiefly of wines, cereals, skins, fruits, iron and zinc ores, manufactured tobacco products, vegetables and petroleum. Area : 113,883 sq. m. Population—16,788,000. Capital—*Algiers*.

ANDORRA— a small semi-independent republic on the Franco-Spanish border on the southern slopes of the Pyrenees under the joint

suzerainty of France and Spanish Bishop of Urgel. It is governed by a Council-General of 24 elected members. It has an abundance of iron, lead, granite lead and timber. Area : 191 sq. m. Population—6,439. Capital—*Andorra la Vella*.

ARABIA— the largest peninsula of the world in South-West Asia inhabited by Arabs and bounded on the north by Iraq and Jordan and enclosed on the other three sides by seas—the Red Sea on the west, the Arabian Sea on the south, and the Persian Gulf and the Gulf of Oman on the east. It now comprises the following States :

Saudi-Arabia— is the most important State of the peninsula, occupying nearly four-fifths of its total area. It consists of Nejd, Hejaz and its two dependencies. Saudi-Arabia is a nearly absolute monarchy. The present king is Faisal Ibn-Abdul-Aziz. A Council of Ministers headed by the Prime Minister rules the country. The country contains the holy places of Islam—*Medina* where lies the tomb of Mohammed and *Mecca*, the birthplace of the Prophet, which contains a great *mosque*. Saudi Arabia possesses one of the great oil reserves of the world. Area : 870,000 sq. m. Population—8,000,000. Capital—*Riyadh*.

Kuwait— is a small Arab State formerly under British protection, became fully independent on June 19, 1961. It extends along the northern end of the Persian Gulf from Iraq to Saudi Arabia. Petroleum is the economic mainstay of Kuwait. It is the world's second largest exporter and fourth largest producer of crude oil. The country is ruled by an Amir ; but all laws are passed by the National Assembly of 50 members. The Prime Minister is appointed by the *Amir*. Area : 5,800 sq. m. Population—383,000. Capital—*Kuwait City*.

Sultanate of Oman and Muscat—the independent State of Muscat and Oman occupies the south-eastern corner of Arabia. Area : 82,600 sq. m. Population—550,000. Capital—*Muscat*.

Qatar— is an independent Arab sheikdom, occupying the Qatar peninsula on the Persian Gulf.

Sheikdoms of Trucial Coast— extend along part of the Gulf of Oman and the southern coast of the Persian Gulf. They are ruled by seven independent Sheikhs. Area : 32,300 sq. m. Population—85,000.

Yemen— occupies the south-west corner of Arabia between Saudi Arabia and Aden protectorate. In March 1958, an agreement was signed whereby Yemen joined United Arab Republic. It became a republic in 1962. Area : 75,000 sq. m. Population—5,000,000. Capital—*Sana*.

Aden— occupies Arabian peninsula at the southern end of the Red Sea, comprises the British Crown Colony of Aden and the protectorate areas, later comprising Western Aden and the Sultanates and Eastern Aden, a federation of Emirates of the South. The whole of Aden, including protectorate area, has 112,000 sq. miles of area and 660,000 population.

Bahrein— is an Arab sheikdom under British protection since 1861. The islands are important for their oil, pearl fisheries and strategic position. Area : 250 sq. m. Population—156,000. Capital—*Manamah*.

ARGENTINA— the second largest South American republic. It is a federal union of twenty-two provinces which elect their own governors and legislatures and one federal district, Buenos Aires whose mayor is appointed by the President. The Constitution is modelled on that of U.S.A., but each province enjoys a large measure of autonomy. The executive is in the hands of the President who selects his Cabinet. The President and Vice-President must be Roman Catholic. They are elected for a 6-year term by direct popular vote. The Congress consists of a Senate of 46 members and a Chamber of Deputies popularly elected. The mountains of Argentina contain deposits of coal, lead, zinc, iron, sulphur, silver, copper and gold. A modern petrochemical industry was projected in 1961. Argentina is a world leader in wheat, corn, flaxseed; alfalfa grown for feed to support huge heads of cattle is the main crop. Area : 1,071,700 sq. m. Population—22,045,200. Capital—*Buenos Aires*.

AUSTRALIA— the continent of Australia, a huge island, is situated S.-E. of Asia proper and below the islands of Indonesia. The Tropic of Capricorn bisects Australia. The country has been settled since 1788. The Commonwealth, proclaimed on January 1, 1901, is a self-governing member of the Commonwealth of Nations, comprising a federation of six States. Australia has become highly industrialized. The executive power is vested in the Sovereign (through the Governor-General) assisted by a Federal Ministry of 25 Ministers of State headed by the Prime Minister. Wool is Australia's greatest primary industry. It is also one of the world's largest wheat producers. Area : 2,971,081 sq. m. Population—11,250,700. Capital—*Canberra*.

AUSTRIA— is a republic in the mountainous regions of Central Europe. After 17 years of occupation between the two World Wars, Austria regained her independence by a treaty on May 15, 1955. The Federal Republic of Austria is composed of nine provinces including Vienna. The President is elected by the people directly for a term of 6 years. He appoints the Chancellor and approves the Ministers. The bicameral legislature consists of the *Bundesrat*, with 50 members chosen by the provincial assemblies and the *Nationalrat*, with 165 members popularly elected. Austria is primarily an industrial country and an important source of high-grade graphite. There are also large iron-ore and oil deposits in the country. Principal exports are paper, chemicals, aluminium, etc. Area : 32,376 sq. m. Population—7,215,000. Capital—*Vienna*.

BELGIUM— a kingdom of North-West Europe. The Government is constitutional hereditary monarchy with a bicameral legislature consisting of the King, the Senate, and the Chamber of Representatives. The Senate is partly directly and partly indirectly elected for 4 years. Belgium is the most densely populated country in Europe. Coal is the only important mineral. Although Belgium is essentially a manufacturing country, agriculture and forestry are also profitable industries. Area : 11,800 sq. m. Population—9,328,100. Capital—*Brussels*.

BOLIVIA— a South American republic. It lies across the Andes, and its great central plateau at an altitude of 12,000 ft. is the highest in the world. The three highest mountain peaks in America are situated on this plateau. Agricultural products consists chiefly of rice, barley, oats, sugarcane, maize, cotton, rubber, potatoes, etc. The most important industry

is mining. It is the world's greatest producer of tin after Malaya and has also large antimony and silver deposits. The country ranks high in the mining of antimony and tungsten. The executive power vests in the President, elected by popular vote in every four years. The Congress consists of a Senate of 27 members elected for 6 years, one-third retiring every 2 years and a Chamber of Deputies of 74 members, elected for 4 years, one-half retiring every 2 years. The President appoints the 10 members of his Cabinet. Area : 416,040 sq. m. Population—3,668,000. Capital—*Sucre* ; Seat of Government—*La Paz*.

BRAZIL— is the largest state in South America both in area and in population. Brazil is a federation of 22 states, with limited autonomy, a federal district and four territories. The President is elected for 5 years. There is a bicameral legislature, Senators being elected for 8 years and Deputies (Representatives) for 4 years. Brazil leads the world in the production of coffee and castor beans and ranks second in cocoa and sugar. The coffee crop represents three-quarters of the world's supply. The country possesses enormous deposits of iron, manganese, bauxite and monazite. Cotton-weaving is the most important manufacturing industry. Its civil aviation industry is one of the largest in the world. Area : 3,289,440 sq. m. Population—79,837,000. Capital—*Brasilia*.

BRUNEI— has been since 1888 a protected sultanate on the north-west coast of the island of Borneo, between Sarawak and British North Borneo. An agreement between Britain and the Sultan in April, 1959, provided for administration separate from that of Sarawak, a written constitution, promulgated on Sept. 28, 1959, and greater internal autonomy. Brunei is second to Canada in oil production in the Commonwealth. Brunei withdrew from the Federation of Malaysia after its Sultan protested that his title's seniority and precedence had not been given proper recognition. Area : 2,226 sq. m. Population—84,000.

BULGARIA— the Republic of Bulgaria is bounded on the north by Rumania, on the west by Yugoslavia, on the south by Greece and on the east by the Black Sea. The Constitution of 1947, modelled after that of Soviet Union, provides that the unicameral National Assembly is the supreme organ of Government. The National Assembly is elected for a 4-year term and chooses the Presidium and the Premier. The Permanent Bureau of the Fatherland Front directs the activities of that organisation. The legislation has enacted complete state ownership or control of industry, banking, foreign and internal trade, and collectivization of agriculture. Area : 42,796 sq. m. Population—8,144,000. Capital—*Sofia*.

BURMA— the Union of Burma, bounded on the north and east by China, south by Bay of Bengal and west by India, has great mineral wealth including petroleum, lead, silver, tin, tungsten, zinc and gem stones. The rubies, sapphires and jade are of highest quality. Three-quarters of the population depend on agriculture. Rice is the economic mainstay of Burma. Other chief products are cotton, wheat, millet, oilseeds, grain, teakwood, etc. It became an independent republic completely outside the British Commonwealth by a treaty effective from January 4, 1948. The parliamentary rule was dissolved following a military

coup on March 2, 1962 and the country is now being ruled by a Revolutionary Council headed by a Chairman. Area : 261,789 sq. m. Population—24,229,000. Capital—*Rangoon*.

BURUNDI— the kingdom of Burundi, part of the former Belgian U.N. Trusteeship of Ruanda-Urundi, became independent on July 1, 1962, changing its name to Burundi. It lies in East Central Africa. The chief product of the country for export is coffee. Area : 10,744 sq. m. Population—2,600,000. Capital—*Usumbura*.

CAMBODIA — is a constitutional monarchy in South-East Asia, which with Vietnam and Laos comprised the former associated States of French Indo-China. Once a powerful kingdom Cambodia came under French protection in 1863. A National Constitution, promulgated on May 6, 1947, replaced the former absolutism. It became an associated State within the French Union in 1949, but declared its independence from France on Nov. 9, 1953. The legislature consists of a National Assembly of 77 members, elected for a 4-year term and a Council of the Kingdom of 24. Cambodia's economy is based on agriculture, fishing and forestry. Area : 88,780 sq. m. Population—5,740,000. Capital—*Phnom Penh*.

CAMEROUN— a federal republic on the western coast of Africa. It was a former German colony which had come under U. N. Trusteeship in 1919 and was being administered in two parts by Britain and France respectively. In 1958 France offered independence to the area administered by her, and the United Nations terminated the Trusteeship on Jan. 1, 1960 when the French Cameroun became independent assuming the name of the Republic of Cameroun. Following a referendum by the U.N. in former British Camerouns, it joined the Republic to form the Federal Republic of Camerouns on October 1, 1961. It has presidential regime. The Federal Assembly comprises 50 members. Area : 168,880 sq. m. Population—4,560,000. Capital—*Yaounde*.

CANADA— is an independent and sovereign member of the Commonwealth of Nations, with the second continuous land area in the world, stretching across the northern part of the North American continent. It is a federal union of 10 provinces whose powers are laid down in British North America Act of 1867. The executive powers rest nominally in the hands of the Governor-General who represents the Crown and is appointed by the Sovereign on the advice of the Prime Minister. The Parliament has two houses—a Senate and a House of Commons. The Senate consists of 102 members, nominated for life by the Governor-General. The House of Commons is elected directly by the people for a term of 5 years and has 265 members. Agriculture is the most important primary industry. The wheat crop is the principal grain export. Canada exports newsprint, wood, wood-pulp, fish and fishery products, fur, aluminium, etc. It is the largest exporter of non-ferrous base metals and leads in the production of asbestos, nickel, gold, metal calcium and nepheline syenite. It ranks second in uranium, gold and gypsum ; third in silver and zinc ; fourth in lead ; and fifth in copper and iron. Of special interest is the uranium ore mined in the northern Canada, one of the only two places so far known in the world where raw material for atomic energy can be mined easily. A discovery of large rich tungsten was made in the N. W.

Territories in 1961. Canadian fishing is the most extensive and prolific in the world. The 5,000-mile Trans-Canada Highway connecting all 10 provinces is the world's longest national highway. Area : 3,851,809 sq. m. Population—19,237,000. Capital—*Ottawa*.

CENTRAL AFRICAN REPUBLIC— formerly the French colony of Ubangi-Shari in Equatorial Africa, this Republic is bounded on the north by Chad, east by Sudan, south by Congo and west by Cameroun. On December 1, 1958 Ubangi-Shari was elected to remain within the French Community and adopted this title. It became fully independent on Aug. 13, 1960. Area : 238,000 sq. m. Population—1,300,000. Capital—*Bangui*.

CEYLON— is an island in the Indian Ocean, 31 miles off the southern tip of India at its closest point. It is within the Commonwealth of Nations. The Constitution provides for a Parliament consisting of a Governor-General (representing the Crown), a Senate of 30 members and a House of Representatives with 157 members. The administration is in the hands of the Cabinet of Ministers headed by the Prime Minister and responsible to the legislature. The principal agricultural products are tea, rubber, coconuts, cocoa, rice, cinnamon and tobacco. Minerals and metals include iron, graphite, limestone, quartz and some precious stones. Area : 25,332 sq. m. Population—10,624,500. Capital—*Colombo*.

CHAD, REPUBLIC OF— a member of the French Community, which proclaimed independence from France on 11th August, 1960, Chad is in North-Central Africa. Its main products are cotton, rice and cattle. Area : 495,000 sq. m. Population—2,800,000. Capital—*Fort Lamy*.

CHILE— a republic of South America along the Pacific coast. Agriculture and mining are the main occupations of the people. Fruits flourish in the central zone and form an important export item. Excellent wines are produced and exported. In Chile, the only natural nitrate in the world is found. So 70 per cent of the world's iodine is obtained here as a by-product in nitrate processing. World's second largest copper producer is Chile. There are also numerous deposits of iron in some provinces as well as reserves of coal. Under the present Constitution, there is a National Congress consisting of a Senate of 45 members elected for eight years, and a Chamber of Deputies with 147 members elected for four years. The President is elected for six years by direct popular vote. Area : 286,396 sq. m. Population—8,492,301. Capital—*Santiago*.

CHINA— is now divided into two parts with the *Republic of China* limited to Taiwan (Formosa) and the mainland under the Communist regime known as *People's Republic of China*.

The *Republic of China* is now confined to Formosa since 1950. It is an island in the China Sea, 90 miles east of the mainland of China. Formosa was a part of the Chinese Empire but ceded to Japan in 1895, after the Sino-Japanese War. In the World War II, the U.S.A. and the U. K. promised to restore this island to China. In 1945, after the surrender of Japan, Chiang Kai-shek was allowed to occupy and administer the island. When in 1949, the Communist Party in China became the ruling power, Chiang was forced to flee to Formosa where he established Nationalist Government of China with the support of U.S.A. Area : 13,886 sq. m. Population—11,612,000. Capital—*Taipei*.

The *People's Republic of China* which controls the entire mainland, was proclaimed on September 21, 1949 after the defeat of the Nationalist Army, under Chiang Kai-shek. The Communists set up a Soviet-type Government. The Constitution of the People's Republic adopted by the National People's Congress in Sept. 1954, established the Congress as the highest organ of State power. Executive power is vested in the Chairman or President elected for a 4-year term by the Congress. He appoints the Premier and his Cabinet. The Cabinet is the highest administrative organ. Effective control is exercised by the Central Committee of the Chinese Communist Party. China is essentially an agricultural country, peasants constituting about 80 p.c. of the population. Cotton, tea, hemp, jute and flax are the most important crops. Area : 4,300,000 sq. m. Population—647,000,000. Capital—*Peking*.

COLOMBIA— a South American republic in the extreme north-west of South America, having a coast-line on both the Atlantic and the Pacific. Colombia is the second largest exporter of coffee. The country is rich in minerals and is a heavy producer of petroleum. Colombia's Congress consists of a popularly elected Senate of 80 members and a House of Representatives, the former with a 4-year term and the latter with a 2-year term. The President is elected by direct vote for four years and is ineligible for the next term. Area : 439,520 sq. m. Population—15,435,100. Capital—*Bogota*.

CONGO— an independent republic in Equatorial Africa within the French Community. Complete independence was proclaimed on Aug. 15, 1960. Area : 139,000 sq. m. Population—840,000. Capital—*Brazzaville*.

CONGO, DEMOCRATIC REPUBLIC OF— a former colony of Belgium in Equatorial Africa, Congo became independent on June 30, 1960. The new nation was, however, torn by widespread violence and pillage begun by mutinous Congolese soldiers and extremists. Katanga, the largest and richest province, proclaimed on July 11, 1960 secession from the Republic. After mass fighting and murder of leaders and international complications, Congolese leaders on May 12, 1961 announced plans for a republic consisting of 20 provinces, with a strong Central Government. Palm oil is the main agricultural cash product, followed by rubber and timber. The country is rich in minerals, having extensive radium and diamond deposits. Area : 905,582 sq. m. Population—15,007,000. Capital—*Leopoldville*.

COSTA RICA— an independent republic in the southernmost part of Central America between Nicaragua and Panama. Coffee of a high quality is the chief crop and export. The forests are extensive. The Constitution presently in force was adopted on November 8, 1949. It abolishes the Army as a permanent institution. The legislative power is vested in a Chamber of Deputies, 57 in number, with a 4-year term, under universal suffrage. The President, elected for 4 years, appoints a Cabinet of 9. Area : 23,421 sq. m. Population—1,412,400. Capital—*San Jose*.

CUBA— an independent Central American State and the largest island in the West Indies. It is the largest cane-sugar producer in the world. Tobacco ranks second in importance. The Constitution was modelled on that of the U.S.A. and provided for a President, a Vice-President, a Senate

and a House of Representatives. But a revolution, led by Fidel Castro, overthrew the Government of Dictator Batista on Jan. 2, 1959 and a Provisional Government was set up. The country is now ruled by a Fundamental Law approved on Feb. 8, 1959, based on the 1940 Constitution with modifications for rule by a *de-facto* Government. Area : 44,206 sq. m. Population—7,336,000. Capital—*Havana*.

CYPRUS— an island in the Mediterranean Sea. A former British Crown Colony, it became a republic on August 16, 1960 and was elected to the British Commonwealth of Nations on March 13, 1961. The Constitution provides for a Greek Cypriot President and a Turkish Cypriot Vice-President, each elected for a 5-year term and a Council of Ministers (7 Greek and 3 Turkish) designated by the President and a House of Representatives, elected for five years and consisting of 35 Greek and 15 Turkish members. Area : 3,572 sq. m. Population—588,000. Capital—*Nicosia*.

CZECHOSLOVAKIA— a Communist republic of Central Europe, formed in 1918 as one of succession States of the Austro-Hungarian Empire ; it then comprised Bohemia, Moravia with Austrian Silesia, Slovakia and Ruthenia. Ruthenia was, however, ceded to Russia by a treaty on June 29, 1945. In 1948, after the establishment of the People's Republic, the old provinces were abolished and the country was divided into 19 regions. It has a Soviet-type Constitution, promulgated on June 8, 1948. There is a Czech Assembly of 300 and a Slovak Assembly of 100, named for 3 years. A new Constitution, announced on July 11, 1960, reorganised the nation into a highly centralised State. The country's natural resources, developed by farming, mining and industry, are great. Area : 53,700 sq. m. Population—14,057,700. Capital—*Prague (Praha)*.

DAHOMY— a former Overseas French Territory in West Africa, Dahomey became an independent republic within the French Community on Dec. 4, 1958 ; full independence outside the Community was proclaimed on Aug. 1, 1960. Area : 47,000 sq. m. Pop.—2,250,000. Capital—*Porto Novo*.

DENMARK— the oldest kingdom of Europe, is a constitutional monarchy. The King and the unicameral Parliament jointly hold legislative power. The Danish Parliament (*Folketing*) has 179 members. Agriculture is all-out important to the Danish economy. Farm products (butter, bacon, cheese, eggs) constitute Denmark's most important export articles. Industry and handicrafts employ more workers than agriculture. Denmark has developed a substantial export of various machinery, manufactured consumers' goods, pharmaceuticals, etc. Its foreign trade is the largest in the world per head of population. Greenland, world's largest island, is a part of Denmark. Area : 16,619 sq. m. Population—4,683,600. Capital—*Copenhagen*.

DOMINICAN REPUBLIC— an independent Central American State, sharing the Caribbean island of Hispaniola with Haiti. It lies east of Cuba between the Atlantic Ocean and the Caribbean Sea. A triumvirate of three civilians now rules the country through a cabinet of nominated ministers. Area : 19,333 sq. m. Population—3,451,700. Capital—*Santo Domingo*.

ECUADOR— a republic on the northern Pacific coast of South America. Ecuador is the world's chief source of the supply of *balsa*, a light wood.

It exports more bananas than any other country. The so-called Panama hats are manufactured in Ecuador. A military junta is holding control of the Government since July, 1963. Area : 226,000 sq. m. Population—4,877,400. Capital—*Quito*.

EL SALVADOR— is the smallest of the six Central American republics and the only one without an Atlantic coast. Coffee plantations on the mountain slopes are the country's economic mainstay. The Constitution provides for a unicameral legislature, the National Assembly of Deputies, elected by popular vote. Executive power is vested in the President, elected for a 5-year term by direct, popular vote. The President is assisted by a Council of Ministers nominated by him. Area : 8,259 sq. m. Population—2,824,300. Capital—*San Salvador*.

ESTONIA— was a Baltic province of imperial Russia, became an independent republic in 1918. Area : 17,413 sq. m. Population—1,196,000. Capital—*Tallinn*.

ETHIOPIA— a kingdom in N.-E. Africa. It is mainly mountainous, volcanic in origin. 90 p.c. of the population depend on agriculture. Coffee of a high quality is the chief earner of country's foreign exchange. The new Constitution, promulgated on Nov. 4, 1955, incorporates a liberal bill of rights, granting franchise to all over 21 and defining the Emperor's powers. The Empire is governed by a Council of Ministers, responsible to the Emperor and a Parliament consisting of a Senate (Upper House) of 105, appointed for a 6-year term ; and a Chamber of Deputies which approximates 210, appointed for 4 years. *Eritrea*, a former Italian Colony on Red Sea coast, was federated with Ethiopia in 1952. Area : 398,350 sq. m. Population—22,200,000. Capital—*Addis Ababa*.

FINLAND— a republic in N.-W. Europe, fringed by islands and dotted with lakes. The country was an autonomous Russian State since 1809, but became independent on Dec. 6, 1917 and a republic on July 17, 1919. Under the Constitution, there is a single Chamber, the *Eduskunta*, composed of 200 members; elected for a 4-year term. The voting system is designed for proportional representation. The legislative power is vested in the Chamber and the President. The highest executive power is held by the President who is elected for a period of 6 years. Of the total land area, 70 p.c. is under forest. As such, one of the chief occupations of the people is lumbering ; articles made from wood include matches, constructional timber, paper, paper pulp and cellulose. Area : 130,165 sq. m. Population—4,599,000. Capital—*Helsinki*.

FRANCE— a republic of western Europe. The monarchical system was overthrown by the French Revolution (1789—93) and succeeded by the *First Republic*. Thereafter successively followed by the *First Empire* under Napoleon (1804-14), a *monarchy* (1814-48), the *Second Republic* (1848-52), the *Second Empire* (1852-70), the *Third Republic* (1871-1946), the *Fourth Republic* (1946-58), the *Fifth Republic* and *French Community* (1958-).

General Charles de Gaulle became Premier on June 1, 1958 after a crisis threatening civil war, followed by the resignation of the shortlived Cabinets and a conflict with Tunisia over the Algerian rebellion. General de Gaulle's proposed reforms were accepted by the Council of Ministers

and were also approved by the voters by an overwhelming majority. The new Constitution establishing the *Fifth Republic*, provides for a strong executive branch headed by the President and a legislature composed of a National Assembly and a Senate. The President is elected for 7 years by an Electoral College appointed by the Premier and may dissolve the Assembly and call for new elections; he may also call for referendums on specific issues and may assume full powers in a national emergency. An absolute majority vote of the Assembly is required to overthrow a Government. The President is assisted by an Executive Council comprising the Premier, heads of States and certain Cabinet Ministers. In June 1960, the Constitution was amended to allow member States that became sovereign but remained within the Community, creating in effect a Commonwealth. The *French Community* established under 1958 Constitution of the *Fifth Republic*, replaces the French Union. It consists of Departments of Metropolitan France, Overseas Departments, Overseas Territories and Republics.

Forestry is an important industry. Vine is cultivated to a great extent. The chief agricultural products are wheat, barley, maize, oats, potatoes, beet-roots, various fruits, etc. The country is rich in mineral wealth. The iron-ore deposits in the eastern region and the bauxite deposit in the central region are amongst the most extensive in the world. Area : 212,659 sq. m. Population—48,416,000. Capital—*Paris*.

GABON, REPUBLIC OF— lies on the Atlantic coast of Equatorial Africa. It proclaimed complete independence from France on August 17, 1960. This Republic is now a member of the French Community. Area : 103,000 sq. m. Population—454,000. Capital—*Libreville*.

GAMBIA— is the smallest nation in Africa both in population and in area. Consisting of a 300-mile strip of land along the Gambia river, it is completely surrounded by the Republic of Senegal except for a small coastline with the port and capital of Bathurst. Gambia's association with Britain goes back to the reign of Elizabeth I, who gave British merchants a charter to trade in the area. The first British settlement was founded in 1686. After disputes and conflicts with the French and Portuguese, the British Colony of Senegambia was eventually established and existed for twenty years prior to the Treaty of Versailles of 1783. Under that treaty Senegambia was divided into British and French spheres of influence, with Senegal going to France and Britain retaining the strip of land along the Gambia river. Administered as a dependency of Sierra Leone in 1822, the Gambia was given its own colonial administration in 1843 and became a Crown colony in 1888. Gambia became an independent nation within the Commonwealth on February 17, 1965. Legislation conferring independence on Gambia had been enacted on December 17, 1964. It became a constitutional monarchy with the Queen as its Sovereign. The most important cash crop is groundnut, which dominates the Gambian economy and accounts for over 90 p.c. of the country's exports; other products include rice, millet, cattle, hides, and dried fish. There are no minerals and virtually no manufacturing industries except groundnut-processing. Area : 4,000 sq. m. Population—320,000. Capital—*Bathurst*.

GERMANY— as a consequence of unconditional surrender on May 8, 1945, the Governments of the United States, the Soviet Union, Great Bri-

tain and France assumed full executive power in Germany. Germany was divided into four zones of occupation under French, British, U.S., and Soviet control. The four occupying powers pledged themselves to treat Germany as an economic entity and to safeguard paralld political developments in the four zones towards restoration of truly democratic institutions. But the efforts to unify Germany were totally unsuccessful and the Western Powers were unable to agree with U.S.S.R. on any fundamental issues. So the *Federal Republic of Germany* was formed on the initiative of the three western occupying powers.

The *Federal Republic of Germany* came into formal existence on September 1, 1949 when Allied High Commission transferred to it the administration of the U.S., British and French zones of occupation of Germany. On May 23, 1949, the German Constituent Assembly at Bonn enacted the Constitution for West Germany. By the Constitution, the Republic was given full legislative, executive and judicial powers, but not in respect of such matters as armaments, reparations, decartelization, foreign affairs, the admission of refugees and other matters. Under the London and Paris Agreements, ratified by the three occupying powers on 5th May, 1955, the Republic attained full sovereignty and independence, though the occupying forces were given permission to remain within German territory. Parliament has 2 chambers, serving 4-year terms. The *Bundestag* (Lower House) is elected. The *Bundesrat* (Upper House) represents the States. The federal President is elected for a 5-year term by the Federal Assembly, convened for this purpose only and made up of Deputies of the *Bundestag* and an equal number of delegates from the Land Parliaments. On proposal of the President, the Chancellor is elected by majority vote of the *Bundestag*. Ministers are named by the President at the instance of the Chancellor. West Germany leads Western Europe as a steel producer. Shipyards annually produce more than 1,000,000 gross registered tons of shipping, more than half of it for export. The oil industry has a refining capacity of more than 10,500,000 tons annually. Economically, West Germany is the most powerful member of the European Common Market. Area : 95,957 sq. m. Population—58,587,500. Capital—*Bonn*.

The *German Democratic Republic* comprises Soviet zone of occupation of East Germany and was proclaimed on Oct. 7, 1949 with its seat at Berlin on the basis of a Constitution adopted on May 30, 1949 by a People's Congress. The Constitution is Soviet in nature. Under a treaty between the German Democratic Republic and the U.S.S.R. in 1955, the Republic became a Sovereign State and was given complete freedom to decide all questions concerning its internal and foreign policy. Parliament approved a constitutional amendment on September 12, 1960 that abolished the Presidency, replacing it with a new Council of State designated as East Germany's highest governing body, with a Chairman. Area : 41,645 sq. m. Population—17,300,000. Capital—*East Berlin*.

GHANA— this former British Gold Coast Colony, now renamed as Ghana after an earlier African State along the Niger river during 800-1076 A.D., became an independent State within the British Commonwealth on March 6, 1957. It became a republic on 1st July, 1960 but remains within the Commonwealth. Ghana has a Parliament of 114 members, elected for a 5-year term, a Cabinet and a President. Parliament voted on Septem-

ber 7, 1962, to extend *President Dr. Kwame Nkrumah's term to cover his life-time*. It is rich in mineral wealth, including gold, manganese, diamonds and bauxite. Cultivation of rubber is fostered. Forest reserves are great. Exports include manganese, cocoa, gold, timber and diamonds. Area : 92,100 sq. m. Population—7,340,000. Capital—*Accra*.

GREAT BRITAIN & NORTHERN IRELAND— comprises England, Wales, Scotland, Northern Ireland, Island of Man and the Channel Islands, lies on the north-west corner of Europe. Parliament is the legislative governing body of the United Kingdom with certain powers over the dependent units but none over the independent States. It consists of two Houses—the House of Lords and the House of Commons. The House of Lords is made up of the peers of the United Kingdom. The House of Commons has 630 members, who are elected by direct ballot and divided as follows : England 511 ; Wales & Monmouth 36 ; Scotland 71 ; Northern Ireland 12. United Kingdom is a constitutional monarchy with the Queen and a Parliament. Supreme legislative power is vested in the Parliament. The executive power of the Crown is exercised by the Cabinet, headed by the Prime Minister. U.K.'s major occupations are manufacturing and trade. The country is rich in mineral resources. The railway systems, approx. 51,188 miles, have remained nationalized since 1948. The world's first power station using atomic energy to create electricity for civilian use, began operation on Oct. 17, 1956, at Calder Hall in Cumberland. Area : 94,511 sq. m. Population—52,872,708. Capital—*London*.

GREECE— is a maritime kingdom on the Balkan Peninsula in S.-E. Europe, stretching down into the Mediterranean Sea. The Government is constitutional hereditary monarchy. Nominal executive power is vested in the King but the administration is carried on by a Council of Ministers, headed by the Premier who must enjoy the Assembly's confidence. The country is chiefly agricultural. The important agricultural product and item of export is tobacco. It possesses the third largest merchant fleet in the world. Area : 51,843 sq. m. Population—8,492,000. Capital—*Athens*.

GUATEMALA— a republic of Central America. Coffee accounts for the bulk of the exports. Other important export crops are bananas, cotton and sugar. The Government is ruled by the President, elected for a 6-year term and the unicameral Congress consisting of 68 members. But following a military coup in March, 1963, the Constitution was suspended and legislature dissolved. It has now dictatorial rule. Area : 42,042 sq. m. Population—4,278,350. Capital—*Guatemala*.

GUINEA— formerly a part of French West Africa, Guinea is situated on the west coast between Portuguese Guinea and Sierra Leone. It achieved independence by rejecting in September, 1958, the new Constitution of the Fifth French Republic. It was proclaimed an independent republic on Oct. 2, 1958. The nation's first Constitution, adopted on November 12, 1958, provided for rule by a President with a 7-year term, and a Cabinet. It has possibly the world's largest deposits of bauxite. It exports coffee, honey, bananas, iron and aluminium ore. Area : 96,865 sq. m. Population—3,360,000. Capital—*Conakry*.

HAITI— a republic of the Caribbean, occupying western third of the

island of Santo Domingo formerly known as Hispaniola. It is the only Negro French-speaking republic in western hemisphere. The Government is ruled by a President, elected for a 6-year term, and a unicameral National Assembly. The country's natural resources are very poor. Area : 10,714 sq. m. Population—4,551,000. Capital—*Port-au-Prince*.

HONDURAS— a republic of Central America. The chief commercial activity is the cultivation of bananas and coconuts on the Atlantic coast. The Constitution provided for a President and a unicameral legislature, Congress of Deputies, each with a 6-year term. But the constitutional government was overthrown in a revolt in Oct., 1963 and a military government with the Commander-in-Chief as its head was established. Area : 44,482 sq. m. Population—2,091,700. Capital—*Tegucigalpa*.

HUNGARY— a Central European Communist republic formed out of Austro-Hungary ; it is the abode of the Magyars. The Soviet-type Constitution was adopted by the Parliament on August 18, 1949, which declared Hungary to be a 'People's Republic.' The supreme organ in State control was declared to be the Parliament with Deputies elected for 4 years by direct vote. When the Parliament is not in session, power is exercised by the Presidium, headed by the Chairman. Executive power is vested in the Cabinet, headed by the Premier. Hungary's bauxite deposits are considered as one of the largest in the world. Area : 35,918 sq. m. Population—10,135,000. Capital—*Budapest*.

ICELAND— an island of volcanic origin in the North Atlantic, close to the Arctic Circle. It was proclaimed a republic on June 17, 1944. Constitutionally, the President is elected for four years by popular vote. Executive power of the State resides in the Prime Minister and his Cabinet. The *Althing* (Parliament) is composed of two Houses. Iceland has no army or navy of its own ; but under NATO and by the 1951 Agreement, U.S.A. maintains on the island its army, navy and air forces. Fishing is the most important industry. Area : 39,758 sq. m. Population—186,900. Capital—*Reykjavik*.

INDONESIA— is a republic of S.-E. Asia, comprising territory formerly known as the Dutch East Indies. Indonesia comprises about 3,000 islands, the largest four being Java, Sumatra, West Borneo and Celebes. Indonesia is one of the richest countries in natural resources. There are vast supplies of tin, oil and coal, and sizeable deposits of bauxite, sulphur, manganese, copper, nickel, gold and silver. It rivals Malaysia in its output of rubber and tin. It also exports coffee, tea, sugar, tobacco, maize, pepper, groundnuts, chinchona, copra and rice. From the early part of the 17th century much of the Indonesian Archipelago was under Dutch rule. Following Japanese military occupation in 1942-45, Nationalists proclaimed a republic on August 17, 1945. Four years of intermittent warfare between Dutch and Indonesian forces were terminated by agreements, signed on November 2, 1949 transferring sovereignty all over Indonesia, except Netherlands New Guinea, to the new interim government known as the Republic of the United States of Indonesia, effective on December 27, 1949. On August 15, 1950 a unitarian State was proclaimed, and its name was formally changed to Republic of Indonesia. Mounting economic and politi-

cal unrest caused President Sukarno on July 5, 1959 to issue a decree dissolving the Constituent Assembly and reinstating the 1945 Constitution which gave him almost unrestricted powers as President-Premier, with a policy of 'guided democracy' for the country. He was named *President for life* on May 18, 1963. Indonesia withdrew from the U.N. on Jan. 21, 1965. Area : 735,865 sq. m. Population—97,085,348. Capital—*Djakarta*.

IRAN— a kingdom of western Asia, also known as *Persia*. Iran is a constitutional monarchy. Executive power is exercised by a Cabinet, headed by the Prime Minister who is appointed by the Shah and is responsible to the *Majlis* (Parliament), which has 136 popularly-elected members. The Shah has power to dissolve the *Majlis*. Iranian oil-field in the south-west territory at the head of the Persian Gulf is the richest single field in existence. Area : 636,060 sq. m. Population—22,523,000. Capital—*Tehran*.

IRAQ— an Arab State in the Middle East, formerly known as Mesopotamia ; now one of the States lying between Arabia and Iran, created as a result of World War I when under the Treaty of Lousanne (1923). Turkey renounced the sovereignty over Mesopotamia. The League of Nations gave a mandate to Britain, which ended in 1932 when Iraq was recognised as a sovereign State. A constitutional monarchy was created in 1924. During a *coup d'etat* on July 14, 1958, the King was assassinated and Iraq was proclaimed a "part of the Arab nation" by a revolutionary council. A republican form of government was established. It is one of the great oil-producing countries of the world. Area : 172,000 sq. m. Population—6,855,500. Capital—*Baghdad*.

IRELAND— is a sovereign independent and democratic State since 1937. The Constitution affirms the right of the Irish Nation to choose its own form of government ; to determine its relations with other nations, and to develop its life in accordance with its own genius and traditions. The head of the State is the President, elected by direct vote for 7 years. The Parliament consists of the President and two Houses : the *Dail Eireann* of 144 members, elected by universal suffrage on a basis of proportional representation, and the *Seanad Eireann* of 60 members. The President, in the exercise and performance of certain of his constitutional powers and functions, is aided and advised by a Council of State. Area : 27,136 sq. m. Population—2,849,000. Capital—*Dublin*.

ISRAEL— lies on the western edge of Asia, bordering on the Mediterranean Sea. This Jewish State in Palestine was established in 1948 in fulfilment of the aspirations of Zionism and following a decision of the U.N. Assembly on the partition of Palestine between Jews and Arabs. It occupies the major portion of Palestine. On Nov. 2, 1917, the British Government made a declaration known as the *Balfour Declaration*, which viewed with favour the establishment in Palestine of a home for the Jewish people. This principle was incorporated in the mandate to Britain, which came into force on Sept. 29, 1923. The British mandate on Palestine ended at midnight on May 14, 1948 when the Jewish National Council proclaimed a Jewish State of Israel. This immediately led to the war against Israel by the Arab States. But armistice agreements signed under U.N. auspices in 1949, terminated the hostilities and left Israel as an independent State.

The declaration of independence by the Jewish National Council on May 14, 1948 stated that the new nation would be "based on the precepts of liberty, justice and peace taught by the Hebrew prophets." The Government is parliamentary democracy. Supreme authority is vested in a one-chambered Parliament called the *Knesset* (Assembly), with 120 members elected by universal suffrage for a 4-year term. The Cabinet is responsible to the *Knesset* and holds office as long as it enjoys the confidence of the *Knesset*. Wine-making is an extensive industry. Area : 7,993 sq. m. Population—2,529,500. Capital—*Jerusalem*.

ITALY—a republic of Europe, stretching S.-E. from the Alps into the Mediterranean Sea, with the islands of Sicily, Sardinia, Elbe and 70 smaller ones. Under the Constitution of 1948, the State is described as a "democratic republic founded on work. Sovereignty belongs to the people who exercise it in the forms and within the limits of the Constitution." The President is elected for 7 years by the Parliament in joint session with regional delegates. The Cabinet, headed by the Premier and nominated by the President, must enjoy the confidence of the Parliament which is composed of the Chamber of Deputies, popularly elected for a 5-year term, and the Senate. Italy is ordinarily the world's largest producer of mercury ; it is also an important producer of sulphur. Area : 131,000 sq. m. Population—50,955,000. Capital—*Rome*.

IVORY COAST, REPUBLIC OF— a former French Overseas Territory on the Gulf of Guinea in West Africa. In accordance with provisions of the 1958 French Constitution, Ivory Coast became fully independent on August 7, 1960. It elected to remain outside the French Community proper, but signed a bilateral agreement on April 24, 1961, retaining close ties with France. It has a presidential form of government. There is a one-chambered National Assembly of 70 members. Area : 189,029 sq. m. Population—3,665,400. Capital—*Abidjan*.

JAMAICA— an island in the West Indies. After remaining more than three centuries as a British dependency, it achieved independence on August 6, 1962 and became the 14th member of the Commonwealth. It is now the world's largest producer of bauxite. Area : 4,411 sq. m. Population—1,737,650. Capital—*Kingston*.

JAPAN— an empire of Asia, situated on several islands in the North Pacific off the coast of China and Siberia. It consists of 4 main islands : *Honshu* (mainland), *Hokkaido*, *Kyushu* and *Shikoku*. Rice is the staple food of the people. The country is rich in flora. Fruit is abundant. Japan is the most highly industrialized nation in the Far East. Major exports are clothing, metal products, plywood, toys, chemical fertilizers, ships, silk, rolling stock, cement, textiles, pottery, glass, rubber, paper, tools, office machines, optical goods, automobiles. Japan continues to be the biggest ship-building nation in the world. A new Constitution was promulgated on Nov. 3, 1946 and became effective on May 3, 1947. Legislative authority rests with the *Diet* which is bicameral, consisting of a *House of Representatives* and a *House of Councillors*, with 250 members elected for 6 years. Executive authority is vested in the Cabinet which is responsible to the Legislature. The Japanese Peace Treaty came into force on April 28, 1952. Japan hereupon resumed its status as a

sovereign and independent power. Area : 182,700 sq. m. Population—97,360,000. Capital—*Tokyo*.

JORDAN— a kingdom in western Asia, formerly under the Palestine Mandate and known as Trans-Jordan. Conquered from the Turks by the British in World War I, Jordan was separated from the Palestine Mandate and placed, in 1921, under the rule of Abdulla Ibn Hussain. In 1923, Britain recognised Jordan's independence, subject to the Mandate. During World War II, Jordan co-operated completely with Britain. On March 22, 1946, Britain abolished the Mandate and recognised the full and complete independence of Jordan. The Government is constitutional monarchy. The Executive consists of a Council of Ministers and the Legislature of a Senate of 30 nominated by the King and a House of Representatives of 40 elected by manhood suffrage. The country is, for most part, desert. Its only industrial product is raw phosphate. Area : 37,500 sq. m. Population—1,860,490. Capitals—*Amman, Jerusalem*.

KENYA— a republic of East Africa. It became independent and a member of the Commonwealth on Dec. 12, 1963. The President heads the Government. It has a Legislative Council. The main products are coffee, tea, cereals, cotton, timber, etc. It is the largest producer of tea in Africa. Area : 224,960 sq. m. Population—9,194,000. Capital—*Nairobi*.

KOREA— a country of North-East Asia on a mountainous peninsula between Manchuria and Japan. It was a vassal of China for 500 years and was annexed by Japan in 1910 until the defeat of Japan in 1945, when it was occupied by USA and USSR. After the end of the World War II, at the Potsdam Conference in 1945, the 38th parallel of latitude was designated as the line dividing the Soviet and the American zones of occupation. South Korea formed the *Republic of Korea* in May, 1948 when USA handed over the Government to them.

On May 1, 1948, the Communists formed the *People's Democratic Republic of Korea* in North Korea with the capital at *Pyongyang*. It has a typical Soviet-type Constitution adopted on Sept. 2, 1948. On June 25, 1950, the North Korean Army invaded South Korea. The U.N. Security Council demanded the immediate withdrawal of the North Korean Army. U.S.A. entered the war in support of the South Korean Army. The truce talks between the parties continued in 1952 and 1953 amid sporadic hostilities. An armistice was signed finally at Panmunjon on July 27, 1953. The armistice contemplated an international political conference on the status of Korea but negotiations for arranging it broke down. The question was discussed without result at the Geneva Conference on Far Eastern problems (April 26—June 19, 1954).

South Korea is a republic with legislative powers vested in a bicameral Parliament and executive power in a popularly-elected President and a Cabinet headed by a Premier. Area : 37,427 sq. m. Population—26,300,000. Capital—*Seoul*.

LAOS— an independent sovereign State in S.-E. Asia, via a constitutional monarchy. It is one of the three former French Indo-Chinese States. It became a French protectorate in 1893 and a member of the Indo-Chinese Union in 1899. The King promulgated a Constitution on May 11, 1947 providing for a constitutional monarchy. Laos became an in-

dependent sovereign State by a treaty with France on July 19, 1949. The regime was recognised in the cease-fire agreement with France on July 21, 1954. It is being ruled by a Coalition Government from June, 1962. Area : 91,000 sq. m. Population—1,881,600. Capital—*Vientiane, Luang Prabang*.

LATVIA—an imperial Russian province, became an independent republic on November 18, 1918 and in 1940 was overrun by the USSR. Area : 24,695 sq. m. Population—2,094,000. Capital—*Riga*.

LEBANON—the Republic of Lebanon is in the Levant. It occupies a strip of land along the Mediterranean coast, sandwiched between Israel in the south and Syria in the north and east. This smallest Arab State was formed out of the five former Turkish Empire districts of North Lebanon, Mount Lebanon, South Lebanon, Beirut and Bekaa. Along with Syria, it became an independent State on Sept. 1, 1920. Both were administered under French mandate till 1941. Lebanon is a free democratic country with a popularly-elected government. It is governed by a President elected by Parliament for a 6-year term and a Cabinet of Ministers appointed by the President but responsible to Parliament. The President must be a Christian, the Premier a Moslem. There is a unicameral legislature (Chamber of Deputies) of 99, elected every 4 years. Area : 4,000 sq. m. Population—2,151,900. Capital—*Beirut*.

LIBERIA—an independent Negro republic of West Africa on the Guinea coast. Most of the country is covered with tropical forests, rich in timber and oil nuts. Liberia was founded in 1822 by the American Colonization Society as a country for freed slaves from U.S.A. and became an independent republic on July 26, 1847. The Government is modelled after that of U.S.A. Area : 43,000 sq. m. Population—1,040,950. Capital—*Monrovia*.

LIBYA—is a kingdom of North Africa, comprising Tripolitania, Cyrenaica and Fezzan, with a Mediterranean coast-line of nearly 1000 miles between Egypt and Tunisia and stretching approximately the same distance south to the Sahara. The greater part of the country is desert and barren. In 1912, an Italo-Turkish war left Libya in Italian hands. After the defeat of Italy in 1943 in the World War II, Tripoli and Cyrenaica remained under British and Fezzan under French military Governments. In conformity with a resolution of the General Assembly of the U.N. on Nov. 21, 1949, Libya became on Dec. 24, 1951, the first independent State created by the United Nations. Libya has a federal form of government and a hereditary monarchy. Parliament consists of a Senate of 24 members, elected for a 8-year term, and a House of Representatives of 55 members, elected from a 4-year term. Area : 810,000 sq. m. Population—1,559,400. Joint Capitals—*Tripoli and Benghazi*.

LIECHTENSTEIN—is an independent Alpine principality between Austria and Switzerland. It is a hereditary monarchy. The Constitution of 1921 provides for a legislature called *Diet*, of 15 members, elected for 4 years. Area—65 sq. m. Population—18,400. Capital—*Vaduz*.

LUXEMBOURG, GRAND DUCHY OF—is a European Grand Duchy situated between Germany, Belgium and France. It was given its

present rank as principality by the Congress of Vienna in 1815. It is governed under the Constitution of 1868, with modifications. Legislative power rests with a Council of State of 21, chosen for life, and a Chamber of Deputies of 52, elected by universal suffrage with executive power delegated to a Minister of State and a Cabinet of at least three Ministers. Area : 999 sq. m. Pop.—329,800. Capital—*Luxembourg*.

MALAGASY—Madagascar, the world's fourth largest island in the Indian Ocean, was a French protectorate since 1895. Constitutional reforms introduced in 1957, gave the island internal autonomy, and it became an autonomous republic within the French Community on Oct. 14, 1958. It became an independent member of the French Community on June 26, 1960 and assumed the name of Malagasy Republic. Area : 230,500 sq. m. Population—6,016,000. Capital—*Tananarive*.

MALAYSIA—The Federation of Malaya became an independent country within the Commonwealth on August 31, 1957, following an agreement between the Queen of England and the Rulers of Malay States. On Sept. 16, 1963, the Federation was enlarged by the accession of the further states of *Singapore*, *Sarawak*, and *British North Borneo* (renamed *Sabah*), and the name of Malaysia was adopted from that date. Brunei withdrew from the proposed Federation on July 9, 1963. Singapore, an island at the tip of Malaya peninsula, declared its secession from the Federation on Aug. 9, 1965.

Malaysia is a 138-sq. mile crescent stretching from Thailand across South China Sea to the backdoor of the Philippines. About 75 p. c. of the total area is forested and mountainous. The country is essentially agricultural. It is one of the biggest producers of rubber and tin. Other items of export include iron ore, timber, palm oil, copra, pepper, etc.

Malaysia is a limited constitutional monarchy, with a Paramount Ruler or Supreme Head of State and a Deputy Supreme Head of State. Legislative authority is vested in a Parliament consisting of two Houses, the Senate of 50 members, under a President, and the House of Representatives of 159 members. Area : 128,478 sq. m. Population—10,674,183. Capital—*Kuala Lumpur*.

MALDIVES—is a group of about 2,000 tiny coral islands in the Indian Ocean, 420 miles south-west of Indian coast, of which only 200 are inhabited. The people are Moslems. Formerly, it was a dependency of Ceylon and thereafter a British protectorate. It became a republic in 1963 but returned to the status of sultanate on Feb. 22, 1954 by a decision of the Assembly. Complete independence was proclaimed in July, 1965. The islands produce coconuts, fruits and nuts, and millets. Area : 115 sq. m. Population—95,000. Capital—*Male, on King's Island*.

MALI, REPUBLIC OF—is an island State in North-West Africa. Formerly the French colony of Sudan, this territory elected on Nov. 24, 1958, to remain as an autonomous republic within the French Community. It formed with neighbouring Senegal on Jan. 27, 1959, the Federation of Mali which was granted full independence on June 20, 1960. The Federation was effectively dissolved on August 22 by the secession of Senegal. Dissolution of the Federation was recognised by the Sudanese Republic, and the title Republic of Mali was adopted on Sept. 22, 1960. Though

it is no longer a member of the French Community, it maintains economic and cultural relations with France. Area : 582,437. Population—4,394,000. Capital—*Bumako*.

MALTA— is a small island in the Mediterranean Sea, 58 miles south of Sicily. It was connected with Sicily from 1090 A.D. Napoleon conquered this island in 1798. It was annexed to Great Britain in 1814. It was a base for the British fleet. Malta voted integration with Great Britain in 1956, but negotiations broke down. On September 21, 1964 Malta became independent. It has an elected legislature of 50, from whom a Prime Minister and a Cabinet are selected. Area : 121.8 sq. m. Population—324,100. Capital—*Valletta*.

MAURITANIA, ISLAMIC REPUBLIC OF— lies on the north-west coast of Africa between Senegal and Spanish Sahara. A former French Overseas Territory, Mauritania became, under the provisions of the 1958 French Constitution, an autonomous State on Nov. 28, 1958 and fully independent on Nov. 28, 1960. It elected to remain outside the French Community, but retain close ties with France. Area : 418,810 sq. m. Population—780,000. Capital—*Nouakchott*.

MEXICO— is a federal democratic republic on the southern part of the North American continent. It comprises 29 States, with President, legislature and judiciary elected by universal suffrage, 2 territories with governors appointed by the President, and a federal district containing Mexico City. The President is elected for six years and is ineligible to succeed himself. He governs with a Cabinet of Ministers. The Federal Congress has two Houses—*Chamber of Deputies* and *Senate*. Mexico has vast mineral wealth and produces petroleum, silver, gold, copper, lead, quick-silver, iron and coal. It is the world leader in the production of silver, sisal, hemp and circle for chewing gum. Agriculture, stock raising, and fishing are important. Main crops for export are cotton, coffee, canesugar, and tomatoes. Mexico was once the centre of an outstanding indigenous civilisation, marks of which can still be seen throughout the country. Area : 758,259 sq. m. Population—39,642,700. Capital—*Mexico City*.

MONACO— is a tiny independent principality in the south of France, on the Mediterranean coast, with land frontiers joining France at every point. It is noted for an exceptionally mild climate and magnificent scenery. It is the smallest and the densest State in the world. It is divided into 3 communes. The King rules through a legislature (National Council) of 18 members elected for 4 years. Area : 0.50 sq. m. Population—22,500. Capital—*Monaco*.

MONGOLIAN PEOPLE'S REPUBLIC— or Outer Mongolia is a sparsely populated country, north of China, and one of the world's oldest countries, once under Chinese suzerainty. Gobi Desert covers much of the central and southern parts. This former Chinese province first declared its independence on March 13, 1921, but monarchy of Bogdo Gegen Khan persisted in limited form until the Khan's death in 1924, when the Government proclaimed the country as the Mongolian People's Republic. China claimed a measure of suzerainty over it until it severed all ties by a plebiscite on October 20, 1945, a treaty with Nationalist China on Jan. 5,

1946, and subsequent Sino-Soviet agreements. Part of North-West Mongolia was incorporated in the USSR as an autonomous province. According to the Constitution of 1940, since amended, legislative power is vested in Parliament (*Great People's Khural*) with members elected for a 3-year term by universal suffrage. Area : 626,000 sq. m. Population—1,018,800. Capital—*Ulan Bator*.

MOROCCO—one of the Barbary States on the north-western tip of Africa. The Empire theoretically was an absolute monarchy, but the country was divided into three zones—the *French*, the *Spanish* and the *International Tangier Zone*. The country in effect was partitioned and subjected to foreign rule from 1912 to 1956. As a result of a Protectorate Treaty with France in 1912 and a Convention between France and Spain in 1912, the country was divided into French and Spanish 'spheres of influence', known respectively as French Morocco and Spanish Morocco. In 1923, the city of Tangier with a small enclave in Spanish Morocco was neutralized and demilitarised. After a lengthy period of unrest, French Government was forced in 1956, to recognise Morocco as an independent sovereign State, and Spanish Government agreed in 1956 that Spanish Morocco was an integral part of the Morocco State. In May, 1956, the Tangier International Control Committee agreed to the integration of Tangier with the rest of Morocco. Under a Constitution approved by referendum on Dec. 7, 1962, it became a constitutional monarchy. The Constitution came into force on Dec. 12, 1962, and provides for a bi-cameral elected legislature (Parliament) with limited legislative powers. The lower house (Chamber of Representatives) consists of 144 members. It is primarily an agricultural country. Fruits and grape abound. Area : 172,104 sq. m. Population—12,665,000. Capital—*Rabat*.

NEPAL—a constitutional monarchy on the southern slopes of the Himalayas, bounded on the north by Tibet, south and west by India, and east by Sikkim and West Bengal. Nepal has two great distinctions of containing Mount Everest (29,028 ft.), the tallest mountain peak in the world, and some of the toughest fighting men in the world—*Gorkhas*. From the middle of the 19th century, Nepal was ruled by the Ranas who were the hereditary prime ministers of the country. But a revolution in 1950-51 overthrew Rana autocracy and restored the long-lost monarchy. A constitution promulgated by the King on February 12, 1959, provided for a constitutional monarchy, with a Cabinet, a lower house of Parliament of 125 and an upper house of 36, 18 elected by the lower house and 18 by the King. But the Constitution did not work well and has been replaced by a new one based on Panchayat system, introduced on April 14, 1963, following a state of emergency in the country and the dismissal of the then cabinet by the King. Area : 54,362 sq. m. Population—9,387,700. Capital—*Katmandu*.

NETHERLANDS—a maritime country in north-western Europe. The Government is constitutional and hereditary monarchy. Executive power is vested exclusively in the Crown, while the legislative powers rest with the Crown and the two-chambered Parliament. The sovereignty over former Netherlands Indies was transferred to the Republic of Indonesia, excepting Netherlands New Guinea, in Dec., 1949. The Nether-

lands rank high among the world's shipbuilding nations. Dairy farming is an important industry. Rotterdam, at the mouth of the Rhine, is the world's second biggest sea-port. The seat of the country's government is at the Hague. Amsterdam is one of the world's diamond-cutting centres. Area : 15,800 sq. m. Population—12,211,950. Capital—*Amsterdam*.

NICARAGUA—is the largest of the Central American States, and lies between the Caribbean Sea and the Pacific Ocean. It is an independent republic. The Constitution, revised in 1950, provides for a Congress of 2 chambers, a Chamber of Deputies of 45 members elected for 6 years and a Senate of 18 members elected for 6 years. The President is elected for 6 years by direct suffrage. Area : 57,145 sq. m. Population—1,596,900. Capital—*Managua*.

NIGER—a republic in West Central Africa. The first French expedition arrived there in 1891 and the country was fully occupied by 1914. It decided on December 18, 1958 to remain an autonomous republic outside the French Community ; full independence outside the French Community was proclaimed on August 3, 1960. Special agreements with France were signed in Paris on April 24, 1961. The Constitution, adopted on Nov. 8, 1960, provides for a presidential system of government, modelled on that of the U.S.A. and the fifth French Republic, and a single-chambered National Assembly. Area : 490,000 sq. m. Population—3,117,000. Capital—*Niamey*.

NIGERIA, THE FEDERATION OF—is situated on the west coast of Africa. It is divided into three distinct autonomous regions : the Northern Region, the Eastern Region and the Western Region. Eastern and Western Nigeria became self-governing in 1957 and Northern Nigeria in 1959. The Federation of Nigeria became fully independent on Oct. 1, 1960, continuing as a member of the Commonwealth and a republic on Oct. 1, 1963. The Constitution provides for a Federal Parliament consisting of the President, a House of Representatives of 312, directly elected, and a Senate, indirectly elected. Area : 356,669 sq. m. Population—55,620,300. Capital—*Lagos*.

NEW ZEALAND—a self-governing member of the British Commonwealth in the South-West Pacific. It consists of North Island and South Island, Stewart Island, Chatham Islands and some small Pacific islands. The executive authority is vested in the Governor-General appointed by the Crown and aided by an Executive Council from an one-chambered legislature, the House of Representatives of 80 members. Area : 103,736 sq. m. Population—2,627,500. Capital—*Wellington*.

NORWAY—a kingdom of North-West Europe, occupying the western part of the Scandinavian Peninsula. Under the Constitution of 1814, Norway is a constitutional and hereditary monarchy. Legislative power is vested in the *Storting* (Parliament) with 150 members. They chose one-quarter of their number to form the *Lagting* (Upper House), the other three-quarters forming the *Odelsting* (Lower Chamber). Executive power is vested in the King acting through the Cabinet (*Statsraad*) comprising the Prime Minister and at least seven Ministers. Norway is one of the greatest seafaring nations, and its merchant marine is the fourth largest

in the world. In the North Cape area is the phenomenon known as *Midnight Sun*. The sun does not set from the middle of May until the end of July nor does it rise above the horizon approximately from Nov. 18 to Jan. 23. Varicoloured Northern Lights or *Aurora Borealis* are visible in winter. Forests cover nearly one-fourth of the area and are the principal sources of wealth. Paper and wood-pulp industries flourish. Fishing is the major occupation of the people, and mining is an important industry. Area : 125,064 sq. m. Population—3,695,000. Capital—*Oslo*.

PAKISTAN—an independent sovereign State of Asia within the Commonwealth. Area : 364,737 sq. m. Population—100,761,700. Capital—*Rawalpindi (Islamabad)*.

PANAMA—a republic occupying the entire isthmus of that name, connecting Central and South America and separating the Atlantic from the Pacific Ocean. Panama Canal is the country's big economic asset. On Nov. 18, 1903 Panama granted the Canal Zone to the U.S. by treaty. Panama Canal Zone is governed by the Canal Zone Government and operated by the Panama Canal Company, both set up on July 1, 1951. The Secretary of the U.S. Army holds all the shares of the Company. According to its 3rd Constitution adopted in 1946, the executive power rests with the President. The single-chambered legislature (National Assembly) is elected for 4 years and at present consists of 53 members. Area : 31,890 sq. m. Population—1,210,150. Capital—*Panama*.

PARAGUAY—a South American State, situated between Argentina, Bolivia, and Brazil. Since the adoption of the 1940 Constitution, Paraguay is a semi-authoritarian republic. The Congress is composed of one chamber. A Council of State has replaced the Senate and its members are nominated by the Government on a corporative basis. The President, who must be a Roman Catholic, is elected for 5 years and appoints a Cabinet. Timber resources of Paraguay are enormous. Area : 157,000 sq. m. Population—1,949,000. Capital—*Asuncion*.

PERU—a maritime republic on the Pacific coast of South America. The country is traversed throughout its length by the Andes. Under the 1933 Constitution, the President is elected for 6 years by direct popular vote. Congress consists of a Senate and of a Chamber of Deputies, each House being elected for 6 years. Peru has vast mineral resources. It ranks fifth in the world in silver production and mines about 25 p.c. of the world's vanadium. The leading agricultural product is cotton. Area : 531,000 sq. m. Population—11,357,100. Capital—*Lima*.

PHILIPPINES—is the largest island group in the Malaya Archipelago. It consists of 7,090 islands, lying about 500 miles off the south-east coast of Asia. The largest islands are Luzon, Mindanao, Samar, Negros, and Palawan. The independence of the Philippines was proclaimed on July 4, 1946 in accordance with the Act passed in the U.S. Congress in 1934. The Philippines have a republican form of Government, based on that of the United States. Executive power is exercised by the President, popularly elected for a 4 year term and assisted by a Cabinet appointed by him. The popularly-elected Congress has two houses—the Senate with 24 members, elected at large for a 6-year term

and the House of Representatives with not more than 120 members, elected for a 4-year term. Forests cover nearly 60 p.c. of the islands and are the sources of excellent timber, bamboo, gums, resins, bee-wax, and medicinal plants. The chief agricultural products are unhusked rice, manila hemp, sugarcane, corn, and tobacco. The principal export fruit is pineapple. Area : 115,758 sq. m. Population—31,270,000. Capital—*Quezon City*.

POLAND— is a communist republic of Central Europe, known as Polish People's Republic. The 1952 Constitution describes Poland as a people's republic in which the highest authority is the *Sejm* (Parliament), elected for a 4-year term by direct secret ballot. The *Sejm* elects a Council of State and a Council of Ministers (cabinet). In most respects it follows the pattern set by the U.S.S.R. Constitution of 1936. The office of the President has been abolished, and the Council of State is the highest organ of the Government. Poland possesses great mineral wealth, particularly coal. Area : 120,355 sq. m. Population—31,339,000. Capital—*Warsaw*.

PORTUGAL— is a republic of S.-W. Europe occupying the western part of the Iberian Peninsula. Under the 1933 Constitution, revised in 1951, Portugal is a Unitary Corporative Republic. Two assemblies of 120 members each were chosen—the first, the National Assembly, to exercise legislative powers, by direct election by heads of families, regardless of sex, for 4 years; the second, the Corporative Chamber, chosen through a system of guild or syndical representation. It deals with economic and social matters and advises the National Assembly. The Assembly may override a presidential veto by a two-thirds vote. The President is elected by an electoral college composed of members of the Assembly and the Chamber and representatives from various districts for a 7-year term. The Premier is appointed by the President but neither the Premier nor his Cabinet is responsible to the National Assembly. Portugal leads in the world in the production of cork. Area : 35,466 sq. m. Population— 9,140,000. Capital—*Lisbon*.

RUMANIA— is a communist republic of S.-E. Europe. On Dec. 30, 1947 King Michael I was forced to abdicate, and the Rumanian People's Republic was proclaimed. People's Democratic Front allocated itself 405 out of 468 seats in the Grand National Assembly. New Constitution was passed and the Presidium and the Council of Ministers appointed. Thereafter progress towards socialism was hastened by the Nationalization Law of 1948 which brought under State control, all industrial enterprises. A new Constitution, modelled on the Soviet Constitution of 1936, was adopted on Sept. 24, 1952. A modification in March, 1961, replaced the Presidium with the State Council, elected by the Assembly from its own membership. The Assembly is the supreme organ of State power. Its members (Deputies) are elected for a 4-year term. Petroleum is the backbone of the country's general economy. Grape vines and fruits abound. Area : 91,584 sq. m. Population—18,813,150. Capital—*Bucharest*.

RWANDA— a small state in North Central Africa, was a part of the former Belgian-U. N. Trusteeship of Ruanda-Urundi. Monarchy was abolished by popular vote on October 12, 1961, and the country became a

republic on July 1, 1962. Urundi, a kingdom now called Burundi, received independence simultaneously. Area : 10,166 sq. m. Population—2,694,750. Capital—Kigali.

SAN MARINO— this smallest republic in the world is bounded by Italian territory. It claims to be the oldest State in Europe being founded in the 4th century. San Marino, the capital, is situated on a spur of the Apennines. It is governed by a Grand Council of 60 members elected by popular vote for a term of 5 years. Two of the members are chosen to exercise executive power for a term of 6 months. Area : 38 sq. m. Population—15,000.

SENEGAL— a republic on the west coast of Africa. In 1946, Senegal became a part of the French Union together with other parts of French West Africa. On Nov 25, 1958, it elected to remain within the French Community as an autonomous republic. On June 20, 1960, it federated with the Sudanese Republic in the Mali Federation, from which it withdrew on August 22 in the same year following a political conflict. A new Constitution, approved in March, 1963, gives executive powers to the President. Area : 77,814 sq. m. Population—3,360,000. Capital—Dakar.

SIERRA LEONE— a peninsula on the west coast of Africa. A former British colony and protectorate, Sierra Leone became fully independent and a member of the Commonwealth on April 27, 1961. For administrative purposes, the country is divided into 3 provinces covering 12 districts. Under the 1961 Constitution, the Governor-General representing the Crown, is appointed on the advice of the Prime Minister. The House of Representatives consists of not less than 60 members. The Cabinet consists of the Prime Minister and not less than 7 other Ministers appointed by the Governor-General on the recommendation of the Prime Minister. Area : 27,925 sq. m. Population—2,190,000. Capital—Freetown.

SINGAPORE— A former British island colony, it lies in the narrowest part of the Strait of Malacca. The island is only 42 km. long and 22.5 km. wide. Nearly 75 p.c. of the total population is of Chinese origin. It is a major commercial centre and an important international air communications hub. Trade is the mainstay of the country's economy. The port handles 40 p.c. of the world's trade in tin and rubber. Industry plays a relatively small part. The island is the site of massive British naval and air bases and the headquarters of the British Far East Command.

The island became a British colony early in the 19th century, by the end of which it was turned into a base for suppressing popular risings in or around Malaya. Along with the other British possessions in the Pacific it was captured by the Japanese during the Second World War; but was liberated at the surrender of Japan. In 1946, Singapore was given the status of a separate British colony. On June 3, 1959, it was proclaimed an autonomous and self-governing State, with Britain retaining control over the island's foreign policy and defence. In 1963, it federated with Malaya and other States to form Federation of Malaysia. It seceded from the Federation by an agreement on Aug. 9, 1965. It became a member of the Commonwealth and was admitted to the U.N. in Sept., 1965. Area : 224.5 sq. m. Population—1,840,000.

SOMALIA— a republic occupying part of the north-east horn of Africa, with a coast-line on the Indian Ocean. The Republic comprising the former British Somaliland Protectorate and the former Italian-UN Trusteeship of Somalia, was proclaimed on July 1, 1960. It is governed by a President elected for a 6-year term by the National Assembly of 121 Deputies elected for a 5-year term. Area : 262,000 sq. m. Population—2,250,000. Capital—*Mogadishu*.

SOUTH AFRICA— the Republic of South Africa is an important independent State of South Africa. It occupies the southernmost part of the African continent. It consists of the following provinces—Transvaal, Cape of Good Hope, Orange Free State, and Natal. The capital of the Union is Pretoria, though Union's legislature meets in Cape Town. It is the richest gold and diamond producing country in the world and one of the richest in uranium. It was a member of the British Commonwealth upto 1960, from which it seceded in 1961, due to its apartheid policy. It became a republic on May 31, 1961. The President is chosen by an electoral college composed of members of the Senate and House of Assembly, for a 7-year term. Area : 472,359 sq. m. Population—17,474,000. Capitals—*Pretoria* (administrative) ; *Cape Town* (legislative).

SPAIN— it occupies almost the entire Iberian Peninsula in western Europe and is separated from France by Pyrenees mountain. Spain has a dictatorial form of Government under General Franco, who is the Chief of the State, national chief of the Falangist Party, Prime Minister, Commander-in-Chief and *Caudillo* (leader) of the Empire. Practically, the country is ruled by the Cabinet (appointed by Franco), the National Council of the Falangist Party and, to a lesser extent, the *Cortes* (Parliament). The principal function of the *Cortes* is the planning and formulation of laws without prejudice to Franco's veto power. On April 1, 1947, Franco himself declared Spain a kingdom again. He was to remain Head of the State, and upon his death or incapacity, the Government and a Council of the Realm constituted by the law, are to nominate as king "that person of royal blood who is most qualified by right," subject to the approval of the *Cortes*. Area : 195,504 sq. m. Population—31,339,500. Capital—*Madrid*.

SUDAN— a republic in North-East Africa. By virtue of the Condominium Agreement between England and Egypt and of the Anglo-Egyptian Treaty of 1936, Sudan was ruled by a Governor-General on the joint behalf of Great Britain and of Egypt. On Feb. 12, 1953, an Anglo-Egyptian Agreement guaranteed to the Sudanese the right to determine their own future and reserved the sovereignty of Sudan until the day of self-determination for the Sudanese. On Dec. 19, 1955, the Sudanese House of Representatives, voted unanimously a declaration for Sudan's complete independence. On Jan. 1, 1956, it was proclaimed a republic and was recognised by both Great Britain and Egypt. But a *coup d'etat* in November, 1958, suspended the Constitution, dissolved the Parliament, and set up a Supreme Council of the Armed Forces and a Council of Ministers. Most part of the country is desert. The country is the world's principal source of gum arabic. Area : 967,500 sq. m. Population—13,180,000. Capital—*Khartoum*.

SWEDEN—a kingdom in North Europe, occupying the largest portion of the Scandinavian Peninsula. The Government is a constitutional hereditary monarchy. The King holds executive and judicial authority together with the Council of States headed by the Prime Minister. The Council is appointed by the King, but is responsible collectively to the *Riksdag* (Parliament). The *Riksdag* has an upper chamber elected indirectly for 8 years and a chamber of 232 elected directly by popular vote for 4 years. Sweden is an important source of high-grade iron ore. It also exports lumber, pulp, paper and other forestry products, and is known for its special technical industries (ball bearings and electrical appliances). Area: 173,378 sq. m. Population—7,695,000. Capital—*Stockholm*.

SWITZERLAND—is surrounded by France, Germany, Austria and Italy. It is a federal republic in Central Europe and a confederation of 22 cantons. Each canton has its own legislature, executive and judiciary department, with the right to veto over federal legislation through referendum. The legislative authority vests in a Parliament of two chambers: a *Standerat* (Council of States) of 44 members and a *Nationalrat* (National Council) of 200 members. The executive power is vested in the *Bundesrat* of 7 members. The President is selected from membership of the Federal Council, serves for one year and customarily, is succeeded by the Vice-President. On the basis of international treaties and guarantees, Switzerland is perpetually neutral. Switzerland enters into no military alliance and is not a member of the U.N. or NATO. It is, however, a member of various international organisations of the U.N., e.g., W.H.O., I.L.O., F.A.O., UNESCO, etc., German, French and Italian are the three official languages of Switzerland. Dairying, stock-raising and watch-making are the principal industries. But the biggest business in Switzerland is the tourist industry. Area: 15,944 sq. m. Population—5,610,000. Capital—*Berne*.

SYRIA—a republic in the Levant, covering a portion of the former Ottoman Empire. It is an arid and uncultivated country situated in a fertile oasis. It had been under French mandate since World War I, and became an independent republic during World War II. The partly U.S.-type Constitution was passed in 1950. It joined Egypt on February 1, 1958 to form *United Arab Republic*; but on September 30, 1961, revolt occurred in Syria against Egyptian domination. Syria seceded from U.A.R. on September 28, 1961. Following a *coup d'etat* on March 8, 1963, Syria is now governed by a Ministerial Cabinet directly responsible to the National Council of the Revolutionary command. Area: 72,234 sq. m. Population—5,398,700. Capital—*Damascus*.

THAILAND—A sovereign independent State in S.-E. Asia between Burma on the west and Laos and Cambodia on the east. The Government is constitutional monarchy. Under the interim Constitution promulgated on Jan 28, 1959, following a bloodless revolution in October, 1958, legislative power is exercised by the King with the advice and consent of a Constituent Assembly, and executive power through the Council of Ministers. The 240 members of the Constituent Assembly, appointed on Feb. 4, 1959, have the additional task of drafting a permanent constitution. Agriculture occupies more than 91 p.c. of the population. The chief crop and the principal earner of foreign exchange is rice. Other important

products are rubber and timber. Tin ore is the important mineral mined in the country. Area : 200,148 sq. m. Population—29,700,000. Capital—*Bangkok*.

TOGO— a republic occupying a narrow strip of territory running north from a short coastline on the Gulf of Guinea and lying between Ghana on the west and Dahomey on the east. Formerly a part of the German colony of Togoland, surrendered in 1914, it was administered by France as a U.N. trusteeship territory from 1946-60. On November 14, 1958, the U.N. voted for the establishment of an independent State. Accordingly, the Republic of Togo was set up on April 27, 1960. The U.S.-modelled constitution, adopted on March 20, 1961, provided for a President and a 46-member unicameral Parliament. Area : 20,400 sq. m. Population—1,603,000. Capital—*Lome*.

TRINIDAD & TOBAGO— these two islands belonging to West Indies group gained independence from British rule on August 31, 1962 and became 15th Commonwealth Nation. The Parliament consists of a Senate of 24 members nominated by the Governor-General, and a House of Representatives. *Trinidad* is only 7 miles away from the coast of Venezuela on the Atlantic. *Tobago* lies about 19 miles north-east of Trinidad. Oil is the principal export from the islands. Area : 1,980 sq. m. Population—871,000. Capital—*Port of Spain*.

TUNISIA— lies on the Mediterranean coast of Africa between Algeria and Liberia and extends southwards to the Sahara. Formerly a French protectorate, Tunisia became independent on March 20, 1956. On July 25, 1957 the Constituent Assembly voted to abolish the monarchy and proclaimed a republic. On June 1, 1959, a new Constitution was adopted. Area—58,000 sq. m. Population—4,546,000. Capital—*Tunis*.

TURKEY—a republic of Asia and Europe since 1928. The European territory was reduced to the city of Constantinople and a narrow strip of country around it. It is 9,254 sq. miles in area is separated from Asia by the Bosphorous and Dardanelles. The Turkey in Asia has 285,246 sq. miles of area and 90 p.c. of the population. The Turkish State is defined as 'republican, nationalist, populist, *etatist*, secular and revolutionary'. The President is chosen from the Deputies of the National Assembly, his term of office being identical with the life of each Assembly. The Democratic Party was ruling the country so long, but in 1960, this Party was overthrown by the Turkish Armed Forces, which ruled through the Committees of National Union up to July 9, 1961, when under a revised constitution, a civilian parliamentary government was established. The new Constitution provides for a bicameral legislature composed of a Senate of 172 and a National Assembly of 450 deputies. The President is elected by Parliament to a 7-year term. About 80 p.c. of the population depends on agriculture. The country has considerable yet unexploited mineral wealth. It is the largest producer of chrome in the world. Area : 295,500 sq. m. Population—31,118,300. Capital—*Ankara*.

UGANDA— lies in East Central Africa to the west of Kenya with Sudan on the north and Republic of Congo on the west. Formerly a British protectorate, Uganda became an independent State within the Commonwealth on October 9, 1962 and a republic on October 9, 1963.

The country is ruled by a coalition government of 2 political parties. It is comprised of 4 provinces. It is the largest coffee producer in the Commonwealth. Area : 93,981 sq. m. Population—7,190,000. Capital—*Kampala*.

UNITED STATES OF AMERICA— a Federal Republic of North America, extending from the Atlantic to the Pacific and from Canada to Mexico, with outlying areas in Alaska, Puerto Rico, Hawaii, Guam and other Pacific islands. The U.S.A. consists of 50 States and the Federal District of Columbia. U.S.A. has a Federal Government which is based on the separation of powers—the President, the House of Congress and the Supreme Court, being designed to balance and restrain each other—hence the famous concept of 'checks and balances'. Each State is self-governing in local matters, but confides to the Federal Government the control of foreign affairs and the army and navy. Police, education, public health, etc., remain within the scope of the individual States. The capital is Washington which belongs to no State and is administered directly by the Federal Government. Executive power is vested in the President elected by popular vote every 4 years. He chooses the members of the Cabinet, who are not (as in England) members of the legislature. Legislative power is vested in the Congress, composed of two houses; the Senate with 2 members from each State, elected to serve for 6 years and the House of Representatives composed of a number of members varying according to the census, elected for 2 years. There is adult suffrage. The third main component of the Constitution is the Supreme Court at Washington. Area : 3,026,789 sq. m. Population—193,251,000 Capital—*Washington*

UNION OF SOVIET SOCIALIST REPUBLICS (U.S.S.R.)—a federal State in East Europe and in North and West Central Asia. The U.S.S.R. emerged as a political entity under the leadership of Lenin after the Russian Revolution of 1917 and the downfall of the empire in Russia. It was proclaimed formally in 1922, after a confused interim period of civil war with Poland (1920), the first State basing its Constitution on Marxist communism. The Union of Soviet Socialist Republic is composed of Russian, Ukrainian, Byelorussian, Azerbaijan, Georgian, Armenian, Kazak, Turkmenian, Kirghiz, Tadjeck, Uzbek, Estonian, Latvian, Lithuanian and Moldavian Soviet Socialist Republics. It is the largest country in the world, stretching across two continents from the North Pacific Ocean to the Gulf of Finland. Vast territory of U.S.S.R., one-sixth of the earth's land surface, contains every phase of climate, except the distinctly tropical, and a varied topography.

The Constitution, adopted on December 5, 1936, provides that the highest organ in the U.S.S.R. is the Supreme Soviet consisting of two equal Houses; that members thereof shall be chosen on the basis of universal, equal and direct suffrage by secret ballot for a term of 4 years; that regular sessions of each body shall be held twice each year; that there shall be a President of each House: that there shall be a Presidium of the Supreme Soviet, which shall consist of a President, 15 Vice-Presidents (one Vice-President for each constituent republic of the Union), a secretary and 16 members; that the Presidium shall act as an executive and directive body between the sessions of the Supreme Soviet. The highest

judicial organ is the Supreme Court, whose members are elected by the Supreme Soviet for a 5-year term. The highest executive and administrative organ of State power is the Council of Ministers appointed by and theoretically responsible to the Supreme Soviet.

The U.S.S.R. is probably the richest country in the world in mineral resources, containing deposits of almost every known mineral. It ranks among the top producing nations in oil, chromite, iron ore, petroleum, gold, copper, manganese, aluminium, platinum, asbestos, salt, and other products. The richest mineral region is that of the Ural mountains. Forests cover nearly 40 p.c. of the total area of the Union and are a considerable source of wealth. Area : 8,599,776 sq. m. Population—226,253,000. Capital—*Moscow*.

UNITED ARAB REPUBLIC— comprises only Egypt following the withdrawal of Syria from the Union that existed from February 1, 1958 to September 30, 1961. Egypt, itself a republic since 1953, occupies the north-east corner of Africa on the Mediterranean Sea. Delays in reforms, corruption in public office and royal extravagance led to a *coup d'etat* on July 23, 1952, by the Society of Free Officers which named Maj. Gen. Mohammed Naguib, Commander-in-Chief. The King was forced to abdicate. Constitution was cancelled and Naguib became Premier on September 7, 1952. When the republic was proclaimed on June 18, 1953, Naguib became its first President and Premier. But Lt.-Col. Gamal Abdel Nasser removed Naguib and became Premier on April 18, 1954. On June 23, 1956 voters elected Nasser President. The Constitution proclaimed Egypt to be an Arab State under a republican and democratic form of government. The President has the right to propose or veto legislation ; he is assisted by 4 Vice-Presidents and a Cabinet. Principal exports are cotton, rice, mineral products, textiles, refrigerators, tyres, cement, electrical instruments. A variety of minerals is found in Egypt. Area : 386,198 sq. m. Population—28,359,000. Capital—*Cairo*.

UPPER VOLTA— an inland State in West Africa. It has common boundaries with Mali on the west. Upper Volta was annexed by France in 1896. It decided in Dec. 1958 to remain an autonomous republic within the French Community. Full independence was proclaimed on Aug. 6, 1960. It elected to remain outside the French Community but maintain close ties with France. The Constitution, adopted on Nov. 27, 1960, provides for a presidential form of government and a unicameral National Assembly. Area : 105,900 sq. m. Population—4,763,000. Capital—*Ouagadougou*.

URUGUAY— the smallest and one of the most advanced republics in South America on the South Atlantic coast. The Constitution of 1952 provides for a Chamber of Deputies and a Senate elected for a 4-year term. There is a 9-man coalition Executive Council elected for 4 years, its leadership rotating annually among the 6 majority members. The Council chooses 9 departmental ministers. Area : 72,172 sq. m. Population—2,592,600. Capital—*Montevideo*.

VATICAN CITY— an independent sovereign State created by the Treaty of 1929, of which the Pope is the head. It lies in the heart of Rome and includes Vatican Palace, the Pope's official residence and the

basilica and square of St. Peter's. The immediate Government of the State of Vatican City is in the hands of a Governor. He is assisted by a Counsellor-General and by a number of offices. There is no political party and no Parliament. Area : 108.7 acres.

VENEZUELA— is the northernmost State of South America on the Carribean Sea coast. The present Constitution of 1961 provides for a strong Central Govt., a President elected for 5 years by direct universal vote ; a Senate and a Chamber of Deputies ; and a Supreme Court. Mining, agriculture and stock-raising are the chief industries. Venezuela ranks high in the production of petroleum. Coffee is the major agricultural product. Area : 352,150 sq. m. Population—8,426,800. Capital—*Caracas*.

VIETNAM— Vietnam, one of the three former French Indo-Chinese Associated States, is situated in S.-E. Asia. It is split between two hostile governments—the Republic of Vietnam (South Vietnam) consisting of the southern half and the Democratic Republic of Vietnam (North Vietnam), controlled by the Communists.

South Vietnam— According to the Geneva Agreement of 1954, which ended the Indo-China War, North and South Vietnam were reunified through elections in 1956. But President Diem flouted the provisions of Geneva Agreement on the ground that the French, and not his Government, had been a signatory to it. It comprises the southern part of the former State of Vietnam and includes all of the former State of Cochinchina and the southern part of Annam. Area : 65,000 sq. m. Population—14,929,000. Capital—*Saigon*.

North Vietnam— has a Soviet-type government. This democratic republic comprises the northern part of the former State of Tonkin and the northern part of Annam. It is no longer a part of the French Union. The Government is organised along typical Communist lines. The decision taken at Geneva in 1954 to reunite North and South Vietnam in 1956, was thwarted by the then South Vietnamese Government. Area : 62,000 sq. m. Population—16,000,000. Capital—*Hanoi*.

WESTERN SAMOA— one of the world's smallest free countries. It comprises 4 inhabited islands of a group in the South Pacific Ocean, lying about 2,600 miles south-west of Hawaii. It was a German colony from 1899-1914 and then a New Zealand Trusteeship under U.N. It became fully independent on Jan. 1, 1962. Area : 1,133 sq. m. Population—116,000. Capital—*Apia*.

YUGOSLAVIA— is a republic of S.-E. Europe in the Balkan Peninsula and is a federation comprising the People's Republics of Serbia, Croatia, Slovenia, Bosnia-Herzegovina, Macedonia and Montenegro. Under the 1953 Constitution, Yugoslavia became a federal republic. It is governed by the President and the Federal Executive Council, a committee of Parliament numbering 34 to 36. The bicameral Parliament (*Skupština*) consists of the Federal Council and the Council of Producers, with deputies representing the constituent republics and organized economic groups. A new Constitution was approved by Parliament on April 7, 1963, which empowered Marshal Tito to remain President for life, made the coun-

try's official name the *Socialist Federal Republic of Yugoslavia* and provided that future Presidents be elected by Parliament and restricted to two consecutive 4-year terms. It is a predominantly industrial country. The main agricultural crops are wheat and maize. The principal minerals are coal, iron, copper, manganese, lead, mercury, bauxite, and salt. Area : 98,766 sq. m. Population—19,392,000. Capital—*Belgrade*.

ZAMBIA— formerly known as Northern Rhodesia, Zambia became an independent Republic on October 24, 1964. It is the 36th African independent State and 26th independent member of the Commonwealth. The executive power rests with the President. Principal agricultural products are maize, tobacco, *Kaffir* corn, millets, and groundnuts. The country is rich in minerals. Area : 288,130 sq. m. Population—3,650,000. Capital—*Lusaka*.

POPULATION OF INDIA

CENSUS OF INDIA— The 1961 census covered the entire country with the exception of portions of Jammu & Kashmir currently under Pakistan and Chinese occupations. A census of Dadra and Nagar Haveli was taken on 1st March, 1962. The Portuguese Government took census of Goa, Daman and Diu on 15th December, 1960 which has been accepted in the count. A census of Pondicherry was taken along with the 1961 census of India. Sikkim has been included in the present census as in previous year.

Land Area and Population— India accounts for about 2.4 per cent of the world's land area and 14.6 per cent of the world population. As a single country, India holds second place in the world. India's increase of population in a decade (1951-61) is 2.2 per cent per annum. The population of India at the census of 1961 was 439.235 million.

Increase of Population— has been due to the following reasons : elimination of famines, epidemic and wasting diseases, specially malaria, general improvement and economic development in the country. Although the birth rate has not fallen appreciably, the death rate has fallen steeply. The expectation of life at birth which was only 27 in 1931, is now 45 due to fall in the death rate. Compared to western countries India still has a very young population with 40 per cent under age 14. This puts a heavy strain on the schools and on the elders who have to provide the youth.

India's Centenarians— There are nearly 100,000 centenarians in India according to Indian census report of 1961. Uttar Pradesh has the highest number of centenarians —23,258.

Male and Female Population— Although the male population of India is higher than the female population, in the higher age-groups, females outnumber males ; out of 8.6 million persons about 70 years of age, about 4.17 million are men and 4.43 million women.

According to U. N. Demographic Report for 1964 an Indian male's average life is 42 and that of a female 41.

BOMBAY AND CALCUTTA : a comparison— Greater Bombay is under a Corporation but not Greater Calcutta. The area of Greater Bombay is 186 sq. miles, population about 41 lakhs. The area of Greater Calcutta is 170 sq. miles, population about 60 lakhs.

Calcutta's population is much higher than that of Bombay, if metropolitan area is taken into account.

Density of population of Calcutta is 73,182 per sq. mile, whereas it is 22,323 per sq. mile in Bombay.

Rate of literacy in Calcutta is 593 per 1000, whereas it is 586 per 1000 in Bombay.

Ratio of female in Greater Bombay is 663 per 1000 males, whereas there are 612 females per 1000 males in Calcutta.

So far as increase of population in a decade (1951-1961) is concerned, the increase in Greater Bombay is 38.7 p.c., whereas the increase in Calcutta is 8.5 p.c.

RELIGIOUS CENSUS

According to census figures of 1961, the Hindus were 850 in every 1,000 in 1951 as against 840 in 1961. The Muslims went up from 99 to 102, the Christians from 23 to 24 and the Sikhs from 17 to 18.

A 'mighty wave' of conversion to Buddhism by scheduled caste Hindus and a large-scale influx of Muslims from East Pakistan into adjoining States are the two outstanding trends of census figures of 1961. There has also been evidence of conversion to Christianity, as the Christians have 'slightly improved' their position.

The Jains and Sikhs have displayed great mobility, large number of them migrating from one State to another, primarily for economic reasons.

The magnitude of conversion to Buddhism by the scheduled castes has indeed been colossal. In the whole of India the number of Buddhists went up from 180,823 in 1951 to 3,250,227 in 1961. The ratio of the population of Buddhists to total population was 0.05 in 1951 and 0.74 in 1961. Maharashtra has been the 'epicentre' of conversion to Buddhism.

Muslim Influx— The number of Muslims went up to 46,939,357. Their increase rate of 25.61 p.c. was 4 p.c. higher than the general average. This is partly due to the influx of over 11,000 Muslims from East Pakistan. In 1951 census, the total number of Muslims in India was 35,414,284.

The increase in the number of chief minority communities in India, are : Christians—23.3 lakhs ; Sikhs—18.3 lakhs and Jains—4.1 lakhs.

INDIAN CENSUS, 1961

Population, Area, etc.

INDIA	...	439,234,771	Rural population (p.c.)	82.0
Males	...	226,293,201	Females per 1,000	941
Females	...	212,941,570	males	...
Rural	...	360,298,168	Variation (1951-61)	77,641,652
Urban	...	78,936,603	P.C. of increase	21.51
Area (sq. m.)	...	1,178,995	(1951-61)	...
Urban population (p.c.)	...	18.0	Density per sq. m.	370

No. of towns	...	2,690	Expectation of Life		
No. of inhabited villages	...	567,169	at Birth (General)	32	45
No. of uninhabited villages	...	54,891	Literacy rate :		
Birth rate	1951	1961	General (p.c.)	16.6	24.0
(per 1,000)	40.9	40.0	Male (p.c.)	24.9	34.4
Death rate			Female (p.c.)	7.9	12.9
(per 1,000)	27.4	18.0	Female pop. (p.c.)	48.6	48.5

SIX MAJOR RELIGIOUS COMMUNITIES, 1961

Hindus	...	366,502,878	Sikhs	...	7,845,170
Muslims	...	46,939,357	Buddhists	...	3,250,227
Christians	...	10,726,350	Jains	...	2,027,267

P. C. INCREASE OF POPULATION, 1951-61

		States			
Andhra	...	15.7	Maharashtra	...	23.6
Assam	...	34.5	Mysore	...	21.6
Bihar	...	19.8	Orissa	...	19.8
Gujarat	...	26.9	Nagaland	...	14.1
Jammu & Kashmir	...	9.4	Punjab	...	25.9
Kerala	...	24.8	Rajasthan	...	26.2
Madhya Pradesh	...	24.2	Uttar Pradesh	...	16.7
Madras	...	11.9	West Bengal	...	32.8
		Territories			
Andaman & Nicobar Is.	...	105.2	Laccadive, Minicoy &		
Dadra & Nagar Haveli	...	39.6	Amindivi Is.	...	14.0
Delhi	...	52.4	Manipur	...	35.0
Goa, Daman & Diu	...	1.7	Pondicherry	...	16.3
Himachal Pradesh	...	21.8	Sikkim	...	17.8
			Tripura	...	78.7

POPULATION OF MAJOR LINGUISTIC GROUPS, 1961

Languages	Number of Persons (in millions)		P.C.
Hindi, Urdu, Hindustani and Punjabi	...	149.9	42.0
Telugu	...	33.0	9.2
Marathi	...	27.0	7.6
Tamil	...	26.5	7.4
Bengali	...	25.1	7.0
Gujarati	...	16.3	4.6
Kannada	...	14.5	4.1
Malayalam	...	13.4	3.8
Oriya	...	13.2	3.7
Assamese	...	5.0	1.4

POPULATION OF INDIA, STATES & TERRITORIES, 1961

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INDIA	States	...	1,178,997	439,234,771	339	27,084	1,913	223	60	
...	Andhra Pradesh	...	106,286	35,983,447	339	27,084	1,913	223	60	
...	Assam	...	47,091	11,872,772	252	25,702	1,565	153	153	
...	Bihar	...	67,196	46,455,610	691	67,665	10,294	118	43	
...	Gujarat	...	72,245	20,633,350	286	18,584	433	43	92	
...	Jammu & Kashmir	...	—	3,560,976	—	6,559	167	1	219	
...	Kerala	...	15,002	16,903,715	1,127	1,574	1	6,429	338	
...	Madhya Pradesh	...	171,217	32,372,408	189	70,414	6,429	219	265	
...	Madras	...	50,331	33,686,953	669	14,124	615	338	230	
...	Maharashtra	...	118,717	39,553,718	333	35,851	3,050	265	3	
...	Mysore	...	74,210	23,586,772	318	26,377	2,972	230	62	
...	Nagaland	...	6,366	369,200	58	814	14	3	187	
...	Orissa	...	60,164	17,548,846	292	46,466	5,659	62	145	
...	Punjab	...	47,205	20,306,812	430	21,269	1,468	187	275	
...	Rajasthan	...	132,152	20,155,602	153	32,240	2,288	145	184	
...	Uttar Pradesh	...	113,654	73,746,401	649	1,12,624	12,720	275	1	
...	West Bengal	...	33,829	34,926,279	1,032	38,530	3,590	184	3	
Territories & other Areas										
...	Andaman & Nicobar Is.	...	3,215	63,548	20	399	13	1	3	
...	Dadra & Nagar. Haveli	...	189	57,963	307	72	—	—	—	
...	Delhi	...	553	2,658,612	4,640	276	23	—	—	
...	Goa, Daman & Diu	...	1,426	626,667	440	—	—	13	13	
...	Himachal Pradesh	...	10,885	1,351,144	124	10,438	1,169	—	—	
...	Laccadive, Minicoy and Amindivi Is.	...	11	24,108	2,192	10	9	1	1	
...	Manipur	...	8,628	780,037	90	1,866	42	—	—	
...	NEFA	...	31,438	336,558	11	2,451	—	5	5	
...	Pondicherry	...	185	369,075	1,995	388	—	1	1	
...	Sikkim	...	2,744	162,189	59	460	59	1	6	
...	Tripura	...	4,036	1,142,005	283	4,932	354	6	6	

RURAL AND URBAN POPULATION, 1921-61

	P.C. of Total Population			P.C. of Total Population	
	Rural	Urban		Rural	Urban
1921	... 88.6	11.4	1951	... 82.7	17.3
1932	... 87.9	12.1	1961	... 82.2	17.8
1941	... 86.1	13.9			

EXPECTATION OF LIFE AT BIRTH (P.C.)

	Male	Female
1901-11	... 22.6	23.3
1911-21	... 19.4	20.9
1921-31	... 26.9	26.6
1931-41	... 32.1	31.4
1941-51	... 32.5	31.7
1951	General : 45.0 p.c.	

ANNUAL BIRTH & DEATH RATES PER 1000

	Birth rate	Death rate
1901-11	... 51.3	43.1
1911-21	... 49.2	48.6
1921-31	... 46.4	36.3
1931-41	... 45.2	31.2
1941-51	... 39.9	27.4
1951-61	... 40.0	18.0

LITERACY RATES PER 1000

	1951	1961		1951	1961
Delhi	384	527	Orissa	158	217
Kerala	407	468	Andhra Pradesh	131	212
Pondicherry	—	374	Tripura	155	202
A. & N. Islands	258	336	Bihar	122	184
Madras	208	314	Nagaland	104	179
Gujarat	231	305	Uttar Pradesh	108	176
Manipur	114	304	Himachal Pradesh	77	171
Maharashtra	209	298	Madhya Pradesh	98	171
W. Bengal	240	293	Rajasthan	89	152
Assam	183	274	Sikkim	73	123
Mysore	193	254	Jammu & Kashmir	—	110
Punjab	152	242	Dadra & Nagar Haveli	—	95
L. M. & A. Islands	152	233	NEFA	—	72

FEMALES PER 1000 MALES, 1961

INDIA	...	941		
States				
Andhra Pradesh	...	981	Gujarat	...
Assam	...	876	Jammu & Kashmir	...
Bihar	...	994	Kerala	...
				940
				878
				1,022

		POPULATION OF INDIA	
		Territories & other Areas	
Madhya Pradesh	953	A. & N. Islands	617
Madras	992	Dadra & Nagar Haveli	963
Maharashtra	936	Delhi	785
Mysore	959	Goa, Daman & Diu	1,070
Nagaland	933	Himachal Pradesh	923
Orissa	1,001	L. M. & A. Islands	1,020
Punjab	864	Manipur	1,015
Rajasthan	908	NEFA	894
Uttar Pradesh	909	Pondicherry	1,013
West Bengal	878	Sikkim	904
		Tripura	932

SEVEN BIG CITIES, 1961

Greater Bombay	4,152,056	Madras	1,729,141
Males	2,496,176	Males	909,741
Females	1,655,880	Females	819,400
Calcutta	2,927,289	Hyderabad	1,251,119
Males	1,815,791	Males	648,575
Females	1,111,498	Females	602,544
Delhi (comprising Delhi, New Delhi & Delhi Cantt.)	2,359,408	Bangalore	1,206,961
Males	1,327,386	Males	644,047
Females	1,032,022	Females	562,914
		Ahmedabad	1,206,001
		Males	668,447
		Females	537,554

SCHEDULED CASTES AND TRIBES, 1961

	Scheduled Castes	Scheduled Tribes
INDIA	64,511,313	29,803,470
States		
Andhra Pradesh	4,973,616	1,324,368
Assam	732,756	2,068,364
Bihar	6,536,875	4,204,770
Gujarat	1,367,255	2,754,446
Jammu & Kashmir	268,530	
Kerala	1,422,057	207,996
Madhya Pradesh	4,253,024	6,678,410
Madras	6,072,536	2,526,646
Maharashtra	2,226,914	1,397,159
Mysore	3,117,232	192,096
Nagaland	126	343,697
Orissa	2,768,858	4,223,757
Punjab	4,139,106	14,182

	<i>Scheduled Castes</i>	<i>Scheduled Tribes</i>
Rajasthan	... 3,359,640	2,309,447
Uttar Pradesh	... 15,417,245	...
West Bengal	... 6,950,726	2,063,883
Territories & other Areas		
A. & N. Islands	... ...	14,122
Dadra & Nagar Haveli	... 1,184	51,261
Delhi	... 341,555	...
Himachal Pradesh	... 369,916	108,199
L. M. & A. Islands	... ...	23,391
Manipur	... 13,376	249,049
NEFA	... ...	5,042
Pondicherry	... 56,861	...
Sikkim	... 7,200	37,170
Tripura	... 119,725	360,070

POPULATION OF MAJOR CITIES AND TOWNS, 1961

Andhra Pradesh			
Hyderabad	... 1,251,119	Muzaffarpur	... 109,048
Vijayawada	... 230,357	Darbhangha	... 103,016
Guntur	... 187,122	Chapra	... 88,264
Visakhapatnam	... 182,004	Bihar	... 78,581
Warangal	... 156,106	Arrah	... 76,766
Rajahmundry	... 122,865	Gujarat	
Eluru	... 108,321	Ahmedabad	... 1,206,001
Nellore	... 106,776	Baroda	... 298,398
Bandar	... 104,417	Surat	... 288,026
Kurnool	... 100,815	Rajkote	... 194,145
Assam		Bhavnagar	... 176,473
Shillong	... 102,398	Jamnagar	... 148,572
Gauhati	... 100,707	Nadiad	... 78,952
Dibrugarh	... 58,480	Porbandar	... 75,081
Silchar	... 41,062	Junagarh	... 74,298
Nowgong	... 38,600	Broach	... 73,639
Digboi	... 35,028	Jammu & Kashmir	
Bihar		Srinagar	... 295,084
Patna	... 364,594	Jammu	... 102,738
Jamshedpur	... 328,044	Anantnag	... 21,087
Dhanbad	... 200,618	Baramula	... 19,854
Gaya	... 151,105	Kerala	
Monghyr	... 146,807	Cochin-Ernakulam	... 313,030
Bhagalpur	... 143,850	Trivandrum	... 302,214
Ranchi	... 140,253		

Calicut	...	248,548	Ahmednagar	...	119,020
Alleppey	...	138,834	Akola	...	115,760
Quilon	...	91,018	Thana	...	109,215
Palghat	...	77,620	Dhulia	...	98,893
Trichur	...	52,685	Aurangabad	...	97,701

Madhya Pradesh

Indore	...	394,941	Nanded	...	81,087
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Jabalpur	...	367,014	Jalgaon	...	80,351
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Gwalior	...	300,587	Bhusawal	...	79,121
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Bhopal	...	222,948			
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Ujjain	...	144,161			
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Raipur	...	139,792			
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Durg	...	133,239			
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Sagar	...	104,676			
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Rutlam	...	87,472			
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Bilaspur	...	86,706			
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Burhanpur	...	82,090			
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Madras

Madras	...	1,729,141			
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Madurai	...	424,810			
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Coimbatore	...	286,305			
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Tiruchirappalli	...	249,862			
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Salem	...	249,145			
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Palayamkottai	...	190,048			
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Tuticorin	...	127,356			
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Vellore	...	122,761			
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Kurichi	...	119,380			
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Thanjavur	...	111,099			
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Nagercoil	...	106,207			
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Kumbakonam	...	96,746			
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Dindigul	...	92,947			
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Kancheepuram	...	92,714			
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Maharashtra

Greater Bombay	...	1,152,056			
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Poona	...	757,426			
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Nagpur	...	690,302			
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Sholapur	...	337,583			
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Nasik	...	215,596			
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Kalyan	...	194,334			
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Kolhapur	...	193,186			
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Amravati	...	187,442			
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Sungli	...	127,183			
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Malegaon	...	121,408			
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Mysore

Bangalore	...	1,206,961			
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Mysore	...	253,865			
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Hubli-Dharwar	...	248,489			
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Mangalore	...	170,253			
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Kolar Gold Fields	...	146,841			
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Belgaum	...	146,796			
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Gulbarga	...	97,069			
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Bellary	...	85,673			
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Bijapur	...	78,854			
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Davangere	...	78,124			
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Orissa

Cuttack	...	146,308			
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Rourkela	...	90,287			
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Puri	...	60,815			
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Berhampur	...	76,931			
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Sambalpur	...	38,915			
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Bhubaneswar	...	38,211			
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Punjab

Amritsar	...	398,047			
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Jullundur	...	265,030			
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Ludhiana	...	244,032			
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Ambala	...	181,747			
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Patiala	...	125,234			
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Chandigarh	...	99,262			
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Ferozepur	...	97,932			
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Rohtak	...	88,193			
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Jugadhri	...	84,337			
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Karnal	...	72,109			
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Rajasthan

Jaipur	...	403,444			
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Ajmer	...	231,240			
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Jodhpur	...	224,760			
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Bikaner	...	150,634			
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Kotah	...	120,345			
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Udaipur	...	111,139	Kamarhati	...	125,457
Alwar	...	72,707	South Dum Dum	...	111,284
Ganganagar	...	63,854	Burdwan	...	108,224
Uttar Pradesh			Baranagore	...	107,837
Kanpur	...	971,062	Panihati	...	93,749
Lucknow	...	655,673	Serampur	...	91,521
Agra	...	508,680	Hooghly-Chinsurah	...	83,104
Varanasi	...	489,864	Titagarh	...	76,429
Allahabad	...	430,730	Nabadwip	...	72,861
Meerut	...	283,997	Krishnagore	...	70,440
Bareilly	...	272,828	Andaman & Nicobar Islands		
Moradabad	...	191,828	Port Blair	...	14,075
Saharanpur	...	185,213	Delhi	...	2,359,408
Aligarh	...	185,020	Delhi (m.c.)	...	2,061,787
Gorakhpur	...	180,255	New Delhi (m.c.)	...	261,545
Jhansi	...	169,712	Delhi Cantt.	...	36,105
Dehra Dun	...	156,341	Himachal Pradesh	a	
Rampur	...	135,407	Mandi	...	13,034
Mathura	...	125,258	Nahan	...	12,439
Shahjahanpur	...	117,702	Manipur		
Mirzapur	...	100,097	Imphal	...	67,717
Ferozabad	...	98,611	Nagaland		
Farrukhabad	...	94,591	Kohima	...	7,246
Faizabad	...	88,296	Pondicherry		
Muzaffarnagar	...	87,622	Pondicherry	...	40,421
Ghaziabad	...	70,438	Karikal	...	22,252
West Bengal			Sikkim		
Calcutta (Corporation)	2,927,289		Gangtok	...	6,848
Howrah	...	512,598	Tripura		
South Suburban	...	341,712	Agartala	...	54,878
Asansol	...	168,689			
Bhatpara	...	147,630			
Kharagpur	...	147,253			
Bally	...	130,896			

P. C. OF MAJOR RELIGIOUS COMMUNITIES TO TOTAL POPULATION

		1951	1961			1951	1961
Buddhists	...	0.05	0.14	Muslim	...	0.91	10.69
Christians	...	2.35	2.44	Sikhs	...	1.74	1.79
Hindus	...	84.98	83.51	Others	...	0.52	0.37
Jains	...	0.45	0.46				

POPULATION OF MAJOR RELIGIOUS COMMUNITIES, 1961

States	Hindu	Christian	Jain	Buddhist	Muslim	Sikh
Andhra Pradesh	3,18,14,029	14,28,729	9,012	6,753	27,15,021	8,563
Assam	78,84,921	7,64,553	9,468	36,513	27,65,509	9,686
Bihar	3,93,47,050	5,02,195	17,598	2,885	57,85,691	44,413
...	1,83,56,061	91,028	4,09,754	3,185	17,45,103	9,646
Gujarat	10,13,193	2,848	1,427	48,360	24,32,067	63,069
Jammu & Kashmir	1,02,82,568	35,87,365	2,967	228	30,27,639	822
Kerala	3,04,25,798	1,88,314	2,47,927	1,13,365	13,17,617	65,715
Madhya Pradesh	3,02,97,115	17,62,954	28,350	777	15,60,414	2,567
Madras	3,25,30,901	5,60,594	4,85,672	27,89,501	30,34,332	57,617
Maharashtra	2,05,82,853	4,87,587	1,74,366	9,770	23,28,376	3,287
Mysore	34,677	195,588	263	42	891	255
Nagaland	1,71,23,194	2,01,017	2,295	454	2,15,319	5,030
Orissa	1,29,30,045	1,49,834	48,754	14,587	3,93,314	67,69,129
Punjab	1,81,32,690	22,864	4,09,417	759	13,14,613	2,74,198
Rajasthan	6,24,37,313	1,01,641	1,22,108	12,893	1,07,88,089	2,83,737
Uttar Pradesh	2,75,42,794	2,01,854	26,973	1,09,205	69,71,287	34,342
West Bengal	...	...	...	...	...	...
Territories	32,781	17,973	3	1,707	7,398	241
A. & N. Islands	56,576	799	120	2	443	—
Dadra & Nagar Haveli	2,234,597	29,269	29,595	5,466	155,453	203,916
Delhi	384,378	227,179	68	189	14,166	—
Goa, Daman & Diu	1,310,019	592	95	6,308	25,619	8,437
Himachal Pradesh	263	56	...	...	23,789	—
L. M. & A. Islands	481,112	152,043	26,940	1,12,253	69,85,287	34,184
Manipur	...	...	...	...	...	...
NEFA	311,223	33,946	76	25	23,470	14
Pondicherry	108,165	2,813	19	49,894	1,207	72
Sikkim	...	10,039	778	325	48,588	523
Tripura	867,998	...	...	...	...	...

WORLD POPULATION

According to U.N. Statistical Year-Book, 1964, India with a total population of 460 million, has the second largest population, trailing behind China's 647 million (at the end of 1957). Soviet Union is third with 225 million, followed by the United States with 189 million.

These four countries account for about half the world population which totalled 3,160 million in mid-1963 and was increasing at an annual rate of 1.8 per cent.

The highest density of population is in the tiny State of Monaco where 28,297 people are living in a total area of 2 sq. kilometers. Portuguese Macao off the Chinese coast has the second largest density of 10,688 people per sq. kilometer.

India's density of population is 148 people in every sq. kilometer.

More than half the adult population in 15 Asian countries is illiterate. 7 of these countries have an illiteracy rate of 75 p.c. or more. India has an illiteracy rate of 76 p.c. Illiteracy rate of some of the Asian countries and territories are listed below—

Bahrein 74.7 p.c.; Brunei 57.4 p.c.; Taiwan 46.1 p.c.; Cyprus 24.1 p.c.; Hong Kong 28.1 p.c.; Indonesia 57.1 p.c.; Iran 87.2 p.c.; Iraq 82.7 p.c.; Israel 15.8 p.c.; Jordan 67.6 p.c.; South Korea 17.8 p.c.; Malaysia 53.0 p.c.; Mongolia 4.6 p.c.; Pakistan 81.2 p.c.; Thailand 32.3 p.c.; Turkey 61.4 p.c.

POPULATION OF THE BIGGEST CITIES

Tokyo	...	10,393,667	Shanghai	...	6,900,000
New York	...	7,81,984	Moscow	...	6,317,000

The above figures, however, refer only to populations within the administrative boundaries of each city.

Hindus in the world— According to U.N. Demographic Year-Book, 1963, there are 11,286,455 Hindus living in 21 countries & territories outside India. Largest number, 10,001,474, live in Pakistan.

POPULATION OF THE WORLD

1. CONTINENTS

	Area (in km.)	Population
Africa	30,366,000	269,000,000
Asia	26,940,000	1,780,000,000
Europe	4,955,000	434,000,000
N. America	24,248,000	276,000,000
Oceania	8,558,000	17,000,000
S. America	17,793,000	153,000,000

2. LEADING COUNTRIES

Asia			Chad ...	2,800,000
Aden ...	660,000		Congo	
Afghanistan ...	14,684,000		(Brazzaville) ...	840,000
Bhutan ...	700,000		Congo, Democratic	
Burma ...	24,229,000		Republic of ...	15,007,000
Cambodia ...	5,740,115		Dahomey ...	2,250,000
Ceylon ...	10,624,507		Ethiopia ...	22,200,000
China ...	647,000,000		Gabon ...	454,000
Formosa ...	11,511,750		Gambia ...	320,000
Hong Kong ...	3,526,500		Ghana ...	7,340,000
India ...	439,234,771*		Guinea ...	3,360,000
Indonesia ...	100,000,000		Ivory Coast ...	3,665,400
Iran ...	22,523,039		Liberia ...	1,040,967
Iraq ...	6,855,478		Kenya ...	9,104,000
Israel ...	2,529,500		Libya ...	1,559,399
Japan ...	97,360,000		Malagasy ...	6,016,300
Jordan ...	1,860,493		Malawi ...	3,752,649
Kuwait ...	383,000		Mali ...	4,394,000
Korea, N. ...	6,500,000		Mauritania ...	780,000
Korea, S. ...	26,277,650		Morocco ...	12,665,000
Laos ...	1,881,603		Mozambique ...	6,593,000
Lebanon ...	2,151,884		Niger ...	3,117,000
Malaysia ...	10,967,628		Nigeria ...	55,620,268
Mongolia ...	1,018,800		Portuguese Guinea ...	544,200
Nepal ...	9,387,661		Rwanda ...	2,694,749
Pakistan ...	100,761,682		Senegal ...	3,360,000
Philippines ...	31,270,000		Sierra-Leone ...	2,190,000
Saudi Arabia ...	6,036,400		Somalia ...	2,250,000
Syria ...	5,398,698		South Africa ...	17,474,000
Thailand ...	29,700,000		Sudan ...	13,180,000
Turkey ...	31,118,276		Togo ...	1,603,000
Viet-Nam, N. ...	17,000,000		Tanzania ...	9,927,170
Viet-Nam, S. ...	16,000,000		Tunisia ...	4,546,000
Yemen ...	4,000,000		U.A.R. ...	28,359,000
Africa			Uganda ...	7,198,000
Algeria ...	10,788,049		Upper Volta ...	4,763,000
Angola ...	4,832,700		Zambia ...	3,650,000
Basutoland ...	708,000		N. America	
Bechuanaland ...	333,000		Canada ...	19,237,000
Burundi ...	2,600,000		Costa Rica ...	1,412,385
Cameroon ...	4,560,000		Cuba ...	7,336,003
Central African			Dominican	
Republic ...	1,300,000		Republic ...	3,451,700

Mexico	...	39,642,671	Austria	...	7,215,000
Nicaragua	...	1,596,860	Belgium	...	9,328,126
Panama	...	1,210,136	Bulgaria	...	8,144,000
U.S.A.	...	193,251,000	Cyprus	...	588,000
S. America			Czechoslovakia	...	14,057,709
Argentina	...	22,045,200	Denmark	...	4,683,578
Bolivia	...	3,668,000	Finland	...	4,599,000
Brazil	...	79,837,000	France	...	48,492,700
Chile	...	8,492,301	Iceland	...	186,912
Colombia	...	15,434,090	Germany, E.	...	17,300,000
Ecuador	...	4,877,400	Germany, W.	...	58,587,500
El Salvador	...	2,824,346	Greece	...	8,492,318
Guatemala	...	4,278,341	Hungary	...	10,135,000
Haiti	...	4,551,000	Ireland	...	2,849,000
Honduras	...	2,091,697	Italy	...	50,955,000
Jamaica	...	1,737,656	Luxemburg	...	329,800
Paraguay	...	1,949,000	Malta	...	324,117
Peru	...	11,357,000	Netherlands	...	12,211,956
Puerto Rico	...	2,529,000	Norway	...	3,695,000
Trinidad &			Poland	...	31,339,000
Tobago	...	922,000	Portugal	...	9,140,000
Uruguay	...	2,592,563	Rumania	...	18,813,131
Venezuela	...	8,426,799	Spain	...	31,339,497
Oceania			Sweden	...	7,694,987
Australia	...	11,185,167	Switzerland	...	5,770,000
New Zealand	...	2,627,488	U. K.	...	54,213,000
Europe			U.S.S.R.	...	226,253,000
Albania	...	1,788,039	Yugoslavia	...	19,392,000

UNION PUBLIC SERVICE COMMISSION

The Union Public Service Commission conduct the following competitive examinations :

(A) *Indian Administrative Service, Indian Foreign Service, etc., examination for recruitment to :—*

Category I—Indian Administrative Service and Indian Foreign Service ;

Category II—Indian Police Service and Delhi & Himachal Pradesh Police Service, Class II ;

Category III—Indian Audit & Accounts Service, Indian Customs & Central Excise Service, Indian Defence Accounts Service, Indian Income-Tax Service (Class I), Military Lands & Cantonment Service (Class I), Indian Ordnance Factories Service (Class I—Asst. Works Managers, non-technical), Indian Postal Service (Class I) Indian Railway Accounts Ser-

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vice, Transportation (Traffic) and Commercial Departments of the Superior Revenue Establishment of Indian Railways, Central Secretariat Service (Section Officers' Grade, Class II), Customs Appraisers' Service (Class II), Delhi & Himachal Pradesh Civil Service (Class II) and Railway Board Secretariat Service (Class II).

(B) *Engineering Services Examination for recruitment to :—*

Indian Railway Service of Engineers, Signal Engineering Department of the Superior Revenue Establishment of Indian Railways, Electrical Engineering Department of the Superior Revenue Establishment of Indian Railways, Mechanical Engineering and Transportation (Power) Departments of the Superior Revenue Establishment of Indian Railways, Central Engineering Service (Class I & II), Central Electrical Engineering Service (Class I & II). Telegraph Engineering Service (Class I), Military Engineer Service (Class I—B & R Cadre and E & M Cadre), Indian Ordnance Factories Service (Class I—Asst. Works Manager), Central Engineering Service (Roads)—Class I, Telegraph Traffic Service (Class II) and Cadre of Asst. Engineer (Workshops)—Class II.

(C) *Engineering Services (Electronics) Examination for recruitment to :—*

Technical Officer (Class I) and Asst. Technical Officer (Class II) in the Civil Aviation Department, Ministry of Transport and Communications, Deputy Engineer-in-Charge (Class I) and Asst. Engineer (Class II) and Technical Asst. (Class II Non-Gazetted) in the Overseas Communications Service, Ministry of Transport and Communications, Engineer (Class I) in the Wireless, Planning and Co-ordination Branch and Monitoring Organisation, Ministry of Transport and Communications, Senior Scientific Officer (Class I) and Junior Scientific Officer (Class II) in the Ministry of Defence and Asst. Engineer (Class II Non-Gazetted), All-India Radio, Ministry of Information and Broadcasting.

(D) *Survey of India, Class I & Class II, Examination.*

(D) *Survey of India, Class II, Examination.*

(E) *Examination for recruitment of Special Class Railway Apprentices in the Mechanical Engineering and Transportation (Power) Departments of the Superior Revenue Establishment of Indian Railways.*

(F) *Defence Service Examinations for admission to :—*

Army, Navy and Air Force Wings of the National Defence Academy, Indian Military Academy, Air Force Flying College, and Indian Navy as Special Entry Cadets.

(G) *Army Medical Corps Examination.*

(H) *Assistants' Grade Examination for recruitment to :—*

Grade IV (Assistants) of the Central Secretariat Service, Indian Foreign Service (Branch—B), and Railway Board Secretariat Service.

(I) *Clerks' Grade Examination for recruitment to :—*

Central Secretariat Clerical Service (Grade II), Railway Board Secretariat Clerical Service (Grade II), Indian Foreign Service (B)—Grade VI and Posts of Lower Division Clerks in the attached offices of the Govt. of India not participating in the Central Clerical Service Scheme.

(J) *Stenographers' Examination for recruitment to :—*

Central Secretariat Stenographers' Service—Grade II (combined), Railway Board Secretariat Stenographers' Service—Grade II (combined), Indian Foreign Service (Branch B)—Grade II (Stenographers' Sub-cadre) and Posts of Stenographers' in the attached offices of the Govt. of India not participating in the Central Secretariat Stenographers' Service Scheme.

Full particulars of the above examinations are available at the Commission's Office on payment of Re. 1.00 by Money Order or on cash payment at the counter.

All correspondence should be addressed to : **The Secretary, Union Public Service Commission, Dholpur House, Shahjahan Road, D.H. Q-P.O., New Delhi-11.**

Brief particulars of the above examinations are given below :

A. Indian Administrative Examination, etc.: This examination is held once a year generally in the month of October/November. Full particulars are available in the month of February/March.

Age : A candidate for Category II—between 20 and 24 years and for any other service between 21 and 24 years on the 1st August of the year during which the examination is held.

Educational Qualification : for Category I—A candidate must hold a degree in Arts, Science (but not a Science degree in Technology or Chemical Engineering), Commerce, Agriculture or Civil, Mechanical or Electrical (including Tele-communication) Engineering of an Indian University ; LL.B. degree of the Bombay, Gujarat, Karnataka and Poona Universities (revised course) or the B.L. degree of Andhra University. For Category II—A candidate must hold a degree of an Indian University. A candidate for the Transportation (Traffic) and Commercial Departments of the Superior Revenue Establishment of Indian Railways must hold a degree of an Indian University or have passed Sections A and B of the Associate Membership Examination of the Institution of Engineers (India) or must hold the Associateship or Fellowship of the Indian Institute of Science, Bangalore or the Hons. Diploma in Civil, Mechanical or Electrical Engineering of the Loughborough College, Leicestershire (England). A candidate for other services must hold a degree of an Indian University.

Scheme of Examination : (i) Written examination and (ii) Personality Test of candidates who are considered suitable for interview on the basis of the written examination.

Subjects for the written examination : *Compulsory*—Essay, General English and General Knowledge. *Optional*—Pure Mathematics ; Applied Mathematics ; Chemistry ; Physics ; Botany ; Zoology ; Geology ; English Literature ; Indian History ; British History ; World History ; International Law ; General Economics ; Political Science ; Law ; Philosophy ; Geography ; one of the following :—Arabic, Chinese, French, German, Latin, Pali, Persian, Russian, Sanskrit and Spanish ; Statistics ; Advanced Accountancy and Auditing ; Mercantile Law ; Applied Mechanics ; Prime Movers ; Hindi.

A candidate for all services other than Category II must select any three of the optional subjects. A candidate for Category II must select any two of the optional subjects excepting Applied Mechanics and Prime

Movers. A candidate must not select both Pali and Sanskrit. Of the History, Law and Mathematics subjects, not more than two can be offered for any Service.

Candidate for a service in Category I must also select any two of the following subjects for the additional papers : Higher Pure Mathematics or Higher Applied Mathematics ; Higher Chemistry ; Higher Physics ; Higher Botany ; Higher Zoology ; Higher Geology ; English Literature from 1780 to 1901 ; Indian History from 1600 to the present day or British Constitutional History from 1603 to the present day or European History from 1789 to 1878 ; Advanced Economic Theory or Advanced Indian Economics ; Political Theory from Hobbes to the present day or Political Organisation and Public Administration ; Advanced Metaphysics including Epistemology or Advanced Psychology including Experimental Psychology ; Medieval Civilisation as reflected in Arabic Literature (570 A.D.—1650 A.D.) or Medieval Civilisation as reflected in Persian Literature ; (570 A.D.—1650 A.D.) or Ancient Indian Civilisation and Philosophy ; Anthropology ; Sociology ; Higher Geography.

B. Engineering Services Examination : This examination is held once a year generally in the month of September. Full particulars are available in the month of March/April.

Age : A candidate for Signal Engineering Department and Electrical Engineering Department of the Superior Revenue Establishment of Indian Railways must have attained the age of 21 years and must not have attained the age of 25 years and a candidate for any other service must be between 20 and 25 years on the 1st August of the year during which the examination is held.

Educational Qualification : A candidate must hold a degree in Engineering of an Indian University or must have passed Sections A & B of the Associate Membership Examination of the Institution of Engineers (India) or have passed the Hons. Diploma examination in Civil, Mechanical or Electrical Engineering of the Loughborough College, Leicestershire. A candidate who holds the B.E. (Tele-communications) degree of an Indian University or have passed the Graduate Membership Examination of the Institution of Tele-communication Engineers (India) or Graduate Membership Examination of the British Institution of Radio Engineers, may compete for Signal Engineering Department, Electrical Engineering Department, Mechanical Engineering and Transportation (Power) Departments of the Superior Revenue Establishment of Indian Railways, Telegraph Engineering Service (Class I), Telegraph Traffic Service (Class II), Cadre of Asst. Engineer (Workshops)—Class II and the Military Engineer Service—Class I (Electrical and Mechanical Cadre).

Scheme of Examinations : (i) Written examination and (ii) Personality Test of candidates who are considered suitable for interview on the basis of written examination.

1. INDIAN RAILWAY SERVICE OF ENGINEERS : *Compulsory*—English (including Essay and Precise-writing), General Knowledge, Applied Mechanics, Construction which includes Paper I—(i) Building Materials and Building Construction and (ii) Design of Structures ; and Paper II—Roads, Railways (General principles governing the design of Railways, Roads, Harbours and other works), Surveying, Sanitary Engineering and

Water Supply and Personality Test. *Optional* (Any two of the following subjects)—Prime Movers, Hydraulics and Hydraulic Machines, Electrical Engineering, Architecture and Town Planning and Mechanical Engineering.

2. ELECTRICAL ENGINEERING DEPARTMENT : *Compulsory*—English (including Essay and Precis-writing), General Knowledge, Electrical Engineering, Mechanical Engineering, Applied Mechanics and Personality Test. *Optional* (Any two of the following subjects)—Physics (including Electricity and Magnetism), Applied Mathematics, Surveying and Electrical Communication Engineering.

3. SIGNAL ENGINEERING DEPARTMENT : *Compulsory*—English (including Essay and Precis-writing), General Knowledge, Electrical Engineering, Electrical Communication Engineering, Mechanical Engineering and Personality Test. *Optional* (Any two of the following subjects)—Prime Movers, Physics (including Electricity and Magnetism), Applied Mechanics, Applied Mathematics and Construction which includes Paper I—(i) Building Materials and Building Construction and (ii) Design of Structures; and Paper II—Roads, Railways (General principles governing the design of Railways, Roads, Harbours and other works).

4. MECHANICAL ENGINEERING AND TRANSPORTATION (POWER) DEPARTMENTS OF THE SUPERIOR REVENUE ESTABLISHMENT OF INDIAN RAILWAYS : *Compulsory*—English (including Essay and Precis-writing), General Knowledge, Applied Mechanics, Theory of Machines and Machine Design, Prime Movers and Personality Test. *Optional* (Any two of the following subjects)—Hydraulics and Hydraulic Machines, Electrical Engineering, Metallurgy, Workshop Technology, Physics (including Electricity and Magnetism) and Workshop Organisation and Management.

5. & 6. CENTRAL ENGINEERING SERVICE (CLASS I & II) : *Compulsory*—English (including Essay and Precis-writing), General knowledge, Applied Mechanics, Construction which includes Paper I—(i) Building Materials and Building Construction and (ii) Design of Structures and Paper II—Roads, Railways (General principles governing the design of Railways, Roads, Harbours and other works), Surveying, Sanitary Engineering and Water Supply and Personality Test. *Optional* (Any two of the following subjects)—Prime Movers, Hydraulics and Hydraulic Machines, Electrical Engineering, Mechanical Engineering and Architecture & Town Planning (for C.E.S. Class I only).

7. & 8. CENTRAL ELECTRICAL ENGINEERING SERVICE (CLASS I & II) : *Compulsory*—English (including Essay and Precis-writing), General Knowledge, Electrical Engineering, Mechanical Engineering, Applied Mechanics and Personality Test. *Optional* (Any two of the following subjects)—Physics (including Electricity and Magnetism), Electrical Communication Engineering, Prime Movers, Applied Mathematics and Hydraulics and Hydraulic Machines.

9. & 10. TELEGRAPH ENGINEERING SERVICE (CLASS I) AND TELEGRAPH TRAFFIC SERVICE (CLASS II) : *Compulsory*—English (including Essay and Precis-writing), General Knowledge, Electrical Communication Engineering, Electrical Engineering, Applied Mathematics,

Mechanical Engineering and Personality Test. *Optional* (Any two of the following subjects)—Prime Movers, Physics (including Electricity and Magnetism) and Applied Mechanics.

11. INDIAN ORDNANCE FACTORIES SERVICE (CLASS I) : *Compulsory*—English (including Essay and Precis-writing), General Knowledge, Mechanical Engineering, Applied Mechanics, Electrical Engineering and Personality Test. *Optional* (Any two of the following subjects)—Physics (including Electricity and Magnetism), Applied Mathematics, Prime Movers, Hydraulics and Hydraulic Machines, Workshop Technology, Workshop Organisation and Management and Theory of Machines and Machine design.

12. MILITARY ENGINEER SERVICES—CLASS I (BUILDING AND ROADS CADRE) : *Compulsory*—English including Essay and Precis-writing), General Knowledge, Applied Mathematics, Construction which includes Paper I—(i) Building Materials and Building Construction and (ii) Design of Structures and Paper II—Roads, Railways (General principles governing the design of Railways, Roads, Harbours and other works), Surveying, Sanitary Engineering and Water Supply and Personality Test. *Optional* (Any two of the following subjects)—Mechanical Engineering, Prime Movers, Hydraulics and Hydraulic Machines, Electrical Engineering and Architecture and Town Planning.

13. MILITARY ENGINEER SERVICES—CLASS I (ELECTRICAL AND MECHANICAL CADRE) : *Compulsory*—English (including Essay and Precis-writing), General Knowledge, Electrical Engineering, Mechanical Engineering, Applied Mechanics and Personality Test. *Optional* (Any two of the following subjects)—Physics (including Electricity and Magnetism), Electrical Communication Engineering, Prime Movers, Applied Mathematics, Hydraulics and Hydraulic Machines.

14. CENTRAL ENGINEERING SERVICE (ROADS)—CLASS I : *Compulsory*—English (including Essay and Precis-writing), General Knowledge, Applied Mechanics, Construction which includes Paper I—(i) Building Materials and Building Construction and (ii) Design of Structures and Paper II—Roads, Railways (General principles governing the design of Railways, Roads, Harbours and other works), Surveying, Sanitary Engineering and Water Supply and Personality Test. *Optional* (Any two of the following)—Prime Movers, Hydraulics and Hydraulic Machines, Electrical Engineering, Architecture and Town Planning and Mechanical Engineering.

15. CADRE OF ASST. ENGINEER (WORKSHOPS)—CLASS II : *Compulsory*—English (including Essay and Precis-writing), General Knowledge, Applied Mechanics, Theory of Machines and Machine Design, Prime Movers, and Personality Test. *Optional* (Any two of the following subjects)—Hydraulics and Hydraulic Machines, Electrical Engineering, Metallurgy, Workshop Technology, Physics (including Electricity & Magnetism) and Workshop Organisation & Management.

C. Engineering Services (Electronics) Examination : This examination is held once a year generally in the months of August/September. Full particulars are available in the month of April.

Age : Between 20 and 25 years on the 1st August of the year during which the examination is held.

Educational Qualification : About the same as Engineering Services Examination or the candidate must hold a Master's or equivalent Hons. Degree with Wireless Communication, Electronics, Radio Physics, Radio Engineering or allied subjects.

Scheme of Examination : (i) Written examination and (ii) Personality Test of candidates who are considered suitable for interview on the basis of the written examination.

Subjects for the written examination : *Compulsory*—English Essay, General English, General Knowledge and Current Affairs, History of Science, Radio Physics, Electronic Components, Applied Electronics Circuits, Electrical and Mechanical Engineering. *Optional* (Any two of the following subjects)—Principles of Acoustics, Transmission Lines and Net Works, Antenna & Wave Propagation, Mathematics, Radar and Micro-waves Engineering including Radio Aids to Navigation and Broadcasting and Television Systems. There will be no practical examination.

D. Survey of India, Class I & Class II Examination : This examination is held once a year generally in the months of November/December. Full particulars are available in the month of July.

Age : Between 20 and 25 years on the 1st August of the year during which the examination is held.

Educational Qualification : A candidate must hold a B.A. or B.Sc. degree with Mathematics as one of the subjects of an Indian University or must have passed Sections A & B of the Associate Membership Examination of the Institution of Engineers (India) or have obtained a Diploma of Faraday House, London or have obtained the Hons. Diploma in Civil, Mechanical or Electrical Engineering of the Loughborough College, Leicestershire or have passed the Graduate Membership Examination of the Institution of Tele-Communication Engineers (India).

Scheme of Examination : FOR CLASS I—(i) Written examination, (ii) Practical examination (for survey only) and (iii) Personality Test of candidates who are considered suitable for interview on the basis of the written examination.

Subjects for the written examination : *Compulsory*—General English, Pure Mathematics, Applied Mathematics, Mensuration, Physics and General Knowledge and Current Affairs. *Optional*—(1) Higher Mathematics—(i) Pure Mathematics and (ii) Applied Mathematics; (2) Survey—(i) Theoretical and (ii) Practical.

FOR CLASS II—(i) Written examination and (ii) Personality Test of candidates who are considered suitable for interview on the basis of the written examination.

Subjects for the written examination : *Compulsory*—General English, Pure Mathematics, Applied Mathematics, Mensuration, Physics and General Knowledge and Current Affairs.

E. Special Class Railway Apprentices' Examination : This examination is held once a year generally in the months of May/June. Full particulars are available in the months of December/January.

Age : Between 16 and 19 years on the 3rd August of the year preceding the year of the examination.

Educational Qualification : A candidate must have passed in the first or second division, the Intermediate examination or equivalent of a University or Board approved by the Govt. of India with Mathematics and at least one of the subjects—Physics and Chemistry, as subjects of the examination or have passed the Pre-Engineering examination of the Delhi Polytechnic or an equivalent examination of any other Indian University.

Scheme of Examination : (i) Written examination and (ii) Personality Test as follows : (a) Intelligence and Mechanical Aptitude Tests and (b) Interview.

Subjects for the written examination : General Knowledge and Current Affairs I, General Knowledge and Current Affairs II, Mathematics I and Mathematics II.

F (i). National Defence Academy Examination : This examination is held twice a year generally in the months of May/June and December for admission to the Courses commencing in the following January and July respectively for the Army, Navy and Air Force Wings of the Academy. A candidate must be an unmarried male. Full particulars are available in the months of November/December and July respectively.

Age : Between 15 and 17½ years on the first day of the month in which the Course commences.

Educational Qualification : A candidate must have passed the Matriculation or possess a Tenth Class certificate from a recognised Higher Secondary school or a school preparing its students for the Indian School Certificate Examination or equivalent examination.

Scheme of Examination : (i) Written examination, (ii) Interview (including series of tests) by the Services Selection Board of candidates who qualify at the written examination and (iii) Physical Endurance Test.

Subjects for the written examination : English, General Knowledge and Current Affairs I, General Knowledge and Current Affairs II, Mathematics I and Mathematics II.

General Knowledge and Current Affairs I mainly comprises Current Affairs and History. General Knowledge and Current Affairs II comprises Science and Geography, Mathematics I comprises Arithmetic and Mensuration. Mathematics II comprises Algebra, Graphs and Geometry.

F (ii). Indian Military Academy Examination : This examination is held twice a year generally in the months of April/May and November for admission to the Courses commencing in the following January and July respectively. A candidate must be an unmarried male. Full particulars are available in the months of October and May respectively.

Age : Between 18 and 21 years on the first day of the month in which the Course commences.

Educational Qualification : A candidate must have passed the Intermediate examination or the first-year examination under the Three-Year Degree Course of an Indian University.

Scheme of Examination : Same as National Defence Academy Examination.

F (iii). Air Force Flying College Examination : This examination is held twice a year generally in the months of April/May and November.

ber for admission to the G. D. Pilots' Courses commencing in the following January and August respectively. A candidate must be an unmarried male. Full particulars are available of October and May respectively.

Age : Between $17\frac{1}{2}$ and 21 years on the first day of the month in which the Course commences.

Educational Qualification : Same as National Defence Academy Examination.

Scheme of Examination : Same as National Defence Academy Examination.

F (iv). Indian Navy Examination : This examination is held twice a year generally in the months of July and December for the selection of Special Entry Cadets for the Indian Navy. A candidate must be an unmarried male. Full particulars are available in the months of January and June respectively.

Age : Between $17\frac{1}{2}$ and $19\frac{1}{2}$ years on the first day of the month in which the Course commences.

Educational Qualification : Same as Indian Military Academy Examination.

Scheme of examination : (i) Written examination, (ii) Interview (including series of tests) by the Services Selection Board of candidates who qualify at the written examination and (iii) Physical Endurance Test.

Subjects for the written examination : *Compulsory*—English, General Knowledge and Current Affairs I, General Knowledge and Current Affairs II, Lower Mathematics I and Lower Mathematics II, Physics plus Chemistry I and Physics plus Chemistry II. *Optional*—British History from 1485, Indian History and Higher Mathematics I and Higher Mathematics II.

A candidate must offer one of the three optional subjects.

G. Army Medical Corps Examination : This examination is held once a year generally in the month of July. Particulars are available the month of February.

Age : Below 30 years on the 31st December of the year during which the examination is held.

Educational Qualification : A candidate must possess a medical qualification included in the First Schedule or the Second Schedule or Part II of the Third Schedule, other than those holding licentiate medical qualifications, to the Indian Medical Council Act, 1956 and be registered on any State Medical Register.

Scheme of Examination : (i) Written examination and (ii) Practical and oral professional tests and interview by the Army Medical Corps Selection Board of candidates who qualify at the written examination.

Subjects for the written examination : General Medicine, Medical Pathology and Parasitology, Applied Physiology, Preventive and Social Medicine, Pharmacology and Therapeutics, General Surgery, Surgical Pathology, Applied Anatomy, Midwifery and Gynaecology, Ophthalmology, Otorhinolaryngology and General Knowledge and Current Affairs.

H. Assistants' Grade Examination : This examination is held as and when necessary.

Age : Between 20 and 25 years on the 1st August of the year during which the examination is notified.

Educational Qualification : A candidate must hold a degree of an Indian University.

Scheme of Examination : Subjects for the written examination : Essay, General English, Arithmetic and General Knowledge including Geography of India. The standard of the question paper on Arithmetic is approximately that of Matriculation examination.

I. Clerks' Grade Examination : This examination is held once a year generally in December. Full particulars are available in June.

Educational Qualification : A candidate must have passed the Matriculation or an equivalent examination.

Scheme of Examination : Subjects for the written examination : English, Present-day India and Everyday Science and Typewriting Test, at a minimum speed of 30 words per minute for those who qualify at the written test.

English comprises drafting, precis-writing, applied grammar, short essay, proof correcting and elementary tabulation.

Typewriting Test comprises two items—(1) paper on printed matter and (2) paper on tabular statement.

J. Stenographers' Examination : This examination is held once a year generally in the months of May/June. Full particulars are available in the months of January/February.

Age : Between 18 and 24 years on the 1st July of the year previous to the one in which the examination is held.

Educational Qualification : A candidate must have passed the Matriculation or an equivalent examination.

Scheme of Examination : Subjects for the examination : English and Shorthand.

English comprises grammar (including punctuation and spelling), precis-writing, simple drafting, etc.

There will be two dictation tests, one at 100 words per minute for 10 minutes and the other at 120 words per minute for 7 minutes. The candidates will be required to transcribe these dictations in 50 and 45 minutes respectively.

Candidates are warned that the conditions for admission to Commission's examinations may not necessarily be the same from year to year.

Copies of Rules, together with application form are available from the Commission's office (The Secretary, Union Public Service Commission, Dholpur House, Shahjahan Road, D.H.Q.—P.O. New Delhi-11) on remitting Re. 1.00 by Money Order or by cash payment at the counter.

EDUCATION, SCIENCE & CULTURE

1. EDUCATION

MINISTRY OF EDUCATION— In November 1963, the two Ministries of Education and Scientific Research & Cultural Affairs were combined into the Ministry of Education consisting of the Department of Education and Department of Science. These two Departments were later abolished in February, 1964 to form a composite Ministry of Education. The Social Welfare Division which formally formed part of the Ministry of Education has since been transferred to a new Department of Social Security in the Ministry of Law on 14th June, 1964.

Scope and Function— The scope and function of the Union Government in the field of education are limited to the subjects included in the Union List of the Constitution for which Union Government have the sole responsibility. These are—maintenance of Central Universities and institutions of national importance declared as such, union agencies and institutions for professional, vocational or technical training or for promotion of special studies or research and co-ordination and determination of standards in institutions of higher education or research. But it is to be noted under the Constitution, education is the direct responsibility of the State Governments. Though the education is essentially a State responsibility, one of the directives of the Constitution enjoins that the "State" shall endeavour to provide free and compulsory education for all children until they complete the age of 14 years. According to another directive of the Constitution the "State" is required to promote educational and economic interest of the weaker section of the people. Emphasis is also laid in the Constitution on the need for economic and social planning, as mentioned in the Concurrent List. One of the special directives of the Constitution enjoins upon the Union Government the duty of developing, enriching and spreading the Hindi language. In the implementation of this directive, the Ministry of Education has an important role to play.

These obligations of the Union Government are discharged by the Ministry of Education. The responsibilities of the Union Government in the State sector of education are discharged through a broadbased system of grants-in-aid to the respective State Governments for developing their educational programmes.

The cultural programmes implemented by the Ministry emphasise such activities which express and promote the basic unity of Indian culture, contribute towards the promotion of emotional integration among people in various parts of the country and bring the rural and urban people closer to one another. The Union Government have an extensive programme of cultural relations with many countries of the world. Through an exchange of cultural delegations and exhibitions, and through participation in international programmes in the field of arts this programme aims at projecting India's cultural heritage abroad and at bringing to India the cultural heritage of other countries.

Organisation—The Ministry was re-organised into five Bureaux and four Divisions. The Bureaux are : (i) School Education, (ii) Higher Education, (iii) Scholarships, (iv) Planning and Ancillary Educational Services and (v) Languages, Literature and Fine Arts. These Bureaux are further divided into Divisions and Units. Besides these Bureaux, four Divisions, viz. (i) Physical Education and Recreation, (ii) External Relations, (iii) Scientific Research and (iv) Administration function as independent Divisions.

Besides the Divisions mentioned above, the Ministry of Education functions through several attached and subordinate offices ; and the pace of its various programmes and activities is supplemented by the efforts made at non-official level by a few autonomous organisations, financed wholly by the Ministry of Education. There are fifty of all such offices, such as Archaeological Survey of India, National Library, Indian School of Mines, Survey of India, University Grants Commission, National Book Trust, National Institute of Sports. Salar Jung Museum, Indian Museum, Sahitya Akademi, Indian Institute of Technology etc.

ADVISORY BODIES FUNCTIONING IN THE MINISTRY OF EDUCATION :—National Board of Basic Education, Central Advisory Board of Education, Education Minister's Conference, National Council for Women's Education, Popular Literature Committee, Council of the National Library, National Council for Rural Higher Education, All India Council for Technical Education, Board of Assessment for Technical and Professional Qualifications, Expert Committee in Mining, Board of Post-Graduate Engineering Studies and Research, Pharmaceutical Education Committee, Expert Committee in Metallurgy, Working Group on Technical Education for the Fourth Five-Year Plan, Expert Committee to review the M.Sc. Technical Applied Physics Courses, Central Advisory Board of Biology, Central Advisory Board of Anthropology, Advisory Board for National Atlas and Geographical Names, Hindi Shiksha Samiti, Central Sanskrit Board, Central Advisory Board of Physical Education and Recreation, All India Council of Sports, Central Advisory Board of Museums, Advisory Committee for the Development of Nava Nalanda Mahavihara (Nalanda, Bihar), Art Purchase Committee for the National Gallery of Modern Art, Central Advisory Board of Archaeology, Committee for the Co-ordination of the Delivery of Books and Newspapers (Public Libraries) Act—1954, Combined Art Purchase Committee for National Museum, Salar Jung Museum and Indian Museum, Indian National Commission for Co-operation with UNESCO, Informal Advisory Committee to advise Dr. Tara Chand, in the Preparation of the History of Freedom Movement in India.

EDUCATION COMMISSION—The Government of India appointed a 16-member Education Commission on July 16, 1964.

The Commission is headed by Dr. D. S. Kothari, Chairman of the University Grants Commission.

The survey of the Commission will also cover the pay scales and service conditions of teachers, which are not considered satisfactory.

The Commission will advice the Government on the national pattern of education and on general principles and policies for developing education at all stages and in all its aspects.

It will not examine the problems of adult, medical or legal education, though such aspects of these problems as are necessary for its comprehensive inquiry may be looked into.

EDUCATIONAL SYSTEM IN INDIA— At the lowest level of our educational system are *Nursery Schools* for children of age-group 3—6. Then come the *Primary* or *Elementary Schools* for children of age-group 6—11. These schools are called *Junior Basic Schools*. The *Secondary Schools*, which follow next, are of two categories—the *Middle* or the *Senior Basic Schools* and the *High Schools*. These cater to the needs of children of roughly the age-groups 11—14 and 11—16 respectively. In some States, the Secondary Schools are called Higher Secondary Schools and cater to the needs of children of roughly the age-group 11—17. In general education, next to High Schools are the *Intermediate Colleges* or the Intermediate Classes of *Degree Colleges*. These generally cover the age-group 16—18. After passing the Intermediate, the students enter Degree Colleges or the Universities and the age-group covered here is roughly 18—24.

EDUCATIONAL PROGRESS

Pre-Primary Education— Rapid progress is being made in the pre-primary education course.

Primary Education— Under Article 45 of the Constitution, the States and the Centre have the responsibility to provide free and compulsory education to children upto 14 years.

It includes junior basic schools. *All India Council for Elementary Education* advises the Central and State Governments in all matters relating to university education and preparation of programmes for the early implementation of compulsory and free education.

Education at the primary stage, except for special schools and some primary schools in urban areas of West Bengal, is free throughout the country. The State Governments have enacted suitable laws or revised the old ones for this purpose. During 1964-65, Government of Rajasthan have passed a new law for compulsory primary education. Already such laws exist in Andhra Pradesh, Assam, Gujarat, Madhya Pradesh, Mysore, Punjab and West Bengal.

In order to improve the quality of education at various levels, the Central Government introduced a centrally-sponsored scheme during 1963-64 for the establishment of *State Institutes of Education*. To begin with, their scope has been limited to the improvement of primary and middle school education. The Union Government will bear the entire expenditure on these institutions. These have been established in all the States except in Nagaland.

Secondary Education— This covers the age-group 14—17. The *Central Board of Secondary Education* was set up on July 1, 1962, for conducting a common all-India higher secondary examination. It caters to the educational needs of the children of the transferable Central Government employees and makes its services available to any secondary schools in or outside India wishing to prepare candidates for its examination. The total number of schools recognised by the Board is now 451 including one in Tehran. The *Central Institute of English* was

established in November, 1958, in Hyderabad, as an autonomous institution with a view to reformulating the objectives of English-teaching in India, modernising the methods of teaching English etc. The Institute has so far trained 900 teachers in all levels. *All-India Council for Secondary Education* suggested that the national pattern of secondary education should ultimately be of twelve years' duration. *State Bureaux of Educational and Vocational Guidance* in different States have been carrying out a programme of training of career masters and guidance counsellors.

Policy has been issued to upgrade the secondary schools and strengthen the science education. For this the Ministry have sponsored projects for raising the standard of education at this stage. Policy towards the multipurpose schools has been directed towards the consolidation of their work rather than the expansion of their number.

The number of secondary schools has risen from 6,682 in 1949-50 to 22,581 in 1963-64. The enrolment at secondary stage (Classes X—XI) has risen from 10.45 lakh in 1949-50 to about 45 lakh in 1963-64.

BASIC EDUCATION

Basic education is now the accepted pattern of the educational system at the elementary level. The progress made in this field is evident from the increase in the number of schools. In 1950-51, there were 33,730 Basic schools (33,379 junior and 351 senior Basic schools) in the country. Their number rose to 89,482 (74,007 junior and 15,475 senior) in 1961-62. It has an activity-centered curriculum wherein the process of learning is correlated with the physical and social environment of the children. Education is imparted through socially useful productive activities like spinning and weaving, gardening, carpentry, leather works, book craft, domestic crafts, pottery, elementary engineering, etc. The emphasis at present is on introducing important feature of basic education in non-basic schools, orientation programmes for officers and teachers to reduce differences between basic and non-basic education, development of an integrated syllabus for elementary schools and conversion of elementary teachers' training institution to the basic type.

Post-basic schools have been started to enable pupils who have been educated in the junior and senior Basic schools, to continue their secondary education along the basic lines. To resolve difficulties faced by such students, a common scheme of examination for both the types of schools and acceptance of crafts of post-basic schools as at par with the elective subjects of multipurpose schools has been evolved.

National Institute of Basic Education, set up in 1956, is engaged in carrying on research and offering training and guidance to teachers and administrators of basic education. The Institute is now a constituent unit of the National Council of Educational Research and Training.

National Board of Basic Education, established in 1962, advises the Union Government on programmes and policies and reviews progress.

HIGHER EDUCATION

Post-secondary education in India is imparted through arts and science colleges, professional colleges, special educational colleges, research insti-

tutions and universities. In States having Boards of Higher Secondary and Intermediate Education, the post-intermediate education is conducted under the direction and control of universities in respect of courses of study, examinations and award of degrees and diplomas.

In the field of higher education, in addition to the Constitutional obligations, the Government of India gives grants-in-aid to State Governments and voluntary organisations and operates a few programmes of international co-operation in education. It also conducts significant pilot projects in higher education of which the most important is that of Rural Institutes.

The Government is responsible for the maintenance of four Central universities—(1) Aligarh Muslim University; (2) Banaras Hindu University; (3) University of Delhi; (4) Visva-Bharati University, Santiniketan.

Higher Education Institutions of All-India Importance—There are 9 national educational institutions that provide higher education of all-India importance and are deemed as universities—

(1) *Jamia Millia Islamia, New Delhi*—provides education from the nursery to the graduate level, and maintenance, in addition, of a Teachers' College, a Rural Institute and under U. G. C. Act, 1956, has been "deemed as a university"; (2) *Gurukul Kangri Vishwavidyalaya, Haridwar*—is another institution of higher education "deemed as a university" under U. G. C. Act, 1956; (3) *Indian Agricultural Research Institute, Delhi*; (4) *Indian Institute of Science, Bangalore*; (5) *Indian School of International Studies, New Delhi*; (6) *Kashi Vidyapith, Varanasi*; (7) *Gujarat Vidyapith, Ahmedabad*; (8) *The Tata Institute of Social Sciences, Bombay*; and (9) *The Birla Institute of Technology and Science, Pilani*.

Assistance to All India Institutions of Higher Education—Grants are made to Gujarat Vidyapith, Ahmedabad and Kanya Gurukula, Dehra Dun.

Central Institute of Rashtrapati Niwas, Simla—is being started at Simla with Government's financial assistance.

An **Inter-University Board** was formed in 1925 for the discussion of university problems and for the mutual recognition of degrees and diplomas in India. The function of this Board is advisory. The Board receives a maintenance grant upto Rs. 32,000 annually from the Union Government.

There are 3 types of universities in India—(1) **Affiliating universities** which merely prescribe courses of study, conduct examinations and award degrees and diplomas but do not undertake the task of teaching; (2) **Affiliating and Teaching university**, in addition to carrying on functions of the affiliating type, offer teaching and research facilities; (3) **Residential and Teaching Type** of universities control all colleges under their jurisdiction and undertake teaching at all levels.

Many research laboratories and institutions are recognised by the Inter-University Board as centres of higher research.

The number of colleges functioning in the country during 1963-64 was 2,111 as against 1,938 in 1962-63. The student enrolment in the universities and colleges rose by 1,12,031, the total being 13,84,697.

UNIVERSITY GRANTS COMMISSION—was appointed in 1953 in pursuance of the recommendations of the University Education Commission appointed by the Government in 1948. It was given an autonomous status

by the U. G. C. Act, 1956, which requires the Commission to take such steps as it may think fit for the promotion and co-ordination of university education and for the determination and maintenance of standards of teaching, examination and research in universities. The grants are paid through U.G.C. to the Central universities on 100 p.c. basis both for their maintenance and development and to all State universities on a sharing basis for their development projects only. The main works of the U.G.C. are : (1) development projects ; (2) improvement of salary scales of teachers; (3) instructing an important scheme for setting up centres of advanced studies attached to different universities ; (4) construction of hostels ; (5) utilisation of services of retired teachers ; (6) travel grants ; (7) exchange of teachers and (8) scholarships and fellowships.

The U.G.C. paid Rs. 7,59,90,272 as grants during 1963-64 to the Central and State Universities. This included Rs. 1.53 crores for scientific education and research and Rs. 96 lakhs for the development of humanities and social sciences. The amount granted for the expansion of engineering and technological education was over Rs. 1 crore.

HIGHER TECHNICAL EDUCATION

The Third Plan provides for the establishment of 23 engineering colleges (including 8 regional colleges) and 94 polytechnics. 18 of these colleges and 68 polytechnics have already started functioning. The State Plans also provide for the establishment of 24 polytechnics for women. 17 of these have started functioning. The total number of Junior Technical Schools functioning in the country is 89. Under the scheme of part-time diploma courses in engineering, 14 centres were set up in 1963-64 to conduct four-year part-time courses for diplomas in engineering.

The *Indian Institute of Technology, Kharagpur*, the first in the chain of 5 higher technological institutes, started functioning in 1951. The *Indian Institute of Technology, Bombay*, and the *Indian Institute of Technology, Madras*, admitted the first batch of students in 1958 and 1959 respectively and the *Institute at Kanpur* in 1960. A new *College of Engineering and Technology* was established in Delhi for under-graduate and post-graduate courses as well as research.

In 1964, 1,764 candidates were admitted to the five Institutes of Technology for the first degree courses in engineering and technology. The distribution of the admission at various Technological Institutes located at different places is : Kharagpur 500, Bombay 395, Madras 326, Kanpur 273 and Delhi 270.

During 1963-64, there were 118 institutions in the country, conducting courses in engineering and technology for the first degree.

During 1964-65, 9,460 graduates and about 15,000 diploma-holders passed out of technical institutions.

A *National Institute for Training in Industrial Engineering* is being set up in Bombay in collaboration with the United Nations' Special Fund. The Institute trains engineers and technicians in Work Management, Production, Planning and Control, Sales Organisation. A *College of Architecture* has been established at Chandigarh. *School of Planning and Architecture*, Delhi and *Indian School of Mines*, Dhanbad are also functioning to impart higher technical education in the country. The latter conducts

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Degree Courses in Mining, Engineering, Applied Geology, Geophysics and Petroleum Technology.

National Institute for Foundry and Forge Technology is being established by the All India Council for Technical Education at Ranchi. The Institute will train engineer specialists and technicians for foundry and forge industry.

Central Institute of Printing Technology—A school for starting the Central Institute has been approved by the All India Council for Technical Education. The Institute will train executive personnel and specialists for printing industry.

Technical Teachers Training Programme—was initiated in 1959. The total number of teachers trained so far under the programme is 252 in 9 centres.

Institutes of Management—The Central Government has also established two *All-India Institutes of Management*, one at Calcutta and another at Ahmedabad, in association with the State Governments concerned. The Ford Foundation has agreed to help the Calcutta Institute with about Rs. 2,42,250 and the Central Government has promised to bear recurring expenses.

The names of the institutions for Courses of Management are:—

- (1) Delhi School of Economics, Delhi University.
- (2) Indian Institute of Social Welfare and Business Management, Calcutta.
- (3) Jamnalal Bajaj Institute of Management Studies, Bombay University.
- (4) Madras University.
- (5) Indian Institute of Management, Ahmedabad.
- (6) Victoria Jubilee Technical Institute, Bombay.
- (7) Indian Institute of Management, Calcutta.
- (8) Osmania University, Hyderabad.
- (9) Thiagaraja Institute of Management Studies, Madurai.
- (10) Indian Institute of Technology, Kharagpur.

RURAL HIGHER EDUCATION

A *National Council for Rural Higher Education* in rural area was established in 1956 to advise the Government on all matters relating to the development of rural higher education. The Council have selected 15 institutions for development into rural institutes and these have started functioning at Sriniketan (W. Bengal), Gandhigram (Madras), Jamianagar (Delhi), Udaipur (Rajasthan), Birouli (Bihar), Bichpuri (U.P.), Sanosara (Gujarat), Coimbatore (Madras), Gargoti (Maharashtra), Amravati (Maharashtra), Rajpura (Punjab), Wardha (Maharashtra), Hanumanamathi (Mysore), Thavanoor (Kerala) and Indore (M.P.). The courses adopted by the Council are : (1) a three-year diploma course in rural science, (2) a two-year certificate course in agricultural science, (3) a three-year certificate course in civil and rural engineering, (4) a one-year sanitary inspectors' course and (5) a one-year preparatory course to initiate matriculates into three-year diploma course. Recognition of the diploma in rural sciences as equivalent to a first degree of a university for purposes of employment has been secured.

Central grants (Recurring and Non-recurring) amounting to

Rs. 19,59,314 and stipend grants amounting to Rs. 65,531.15 P. only were released to the Rural Institutes upto December 31, 1964.

The total number of candidates who took the annual and supplementary examinations for the various diploma and certificate courses conducted by the National Council for Rural Higher Education in April and October, 1964 was 1,188. Of them 901 were declared successful.

A concurrent course of general education and teachers' training of three years' duration after the higher secondary stage has been introduced as a pilot project at the Rural Institute at Gargoti.

A post-graduate diploma in rural economics and co-operation, started in 1961, has been provisionally recognised by the Government of India as equivalent to a M.A. degree of a recognised university.

SOCIAL EDUCATION

It aims at providing education for the betterment of life for the adult population. The social education provides an educational base for community development programmes and includes use of libraries, education in citizenship, cultural and recreational activities, utilization of audio-visual aids and organisation of youth and women's groups for community development. Following progress has been made in this direction—(1) Establishment of a National Centre for Fundamental Education at New Delhi, to train higher grade personnel for social educational works, research, etc., (2) Library Institute at Delhi University, (3) Delhi Public Library, (4) a Social Education Institute for Workers at Indore, (5) Janata Colleges and Vidyapiths. The objective of the Vidyapith is to train village youths for rural leaderships, (6) Production of literature for Social Education, such as prize competition for books for neo-literates, (7) UNESCO Prize Competition for books for new-reading public, (8) Sahitya Shibiras are literary workshops for training authors in the techniques of writing books for neo-literates, (9) direct production of new books, (10) National Book Trust, (11) Popular Literature Committee, advising the Government on matters relating to the production of literature for neo-literates and for new-reading public. In this sector the Government maintain, develop and help the development of a few libraries of all-India importance. There is an *Institute of Library Science* in Delhi for training up librarians.

EDUCATION OF THE HANDICAPPED— A National Advisory Council advises the Government on all problems concerning education, training and employment of the physically and mentally handicapped. The following are the main institutions—(1) *National Centre for the Blind, Dehra Dun*, provides an integrated service for the blind. (2) A national library has been built up at the Centre largely with the literature produced by its own press. (3) A training centre for the adult deaf has been established at Hyderabad. (4) Special employment exchanges for the handicapped are located at Bombay, Delhi, Hyderabad and Madras. (5) A model school for blind children was established at Dehra Dun in 1959. (6) A training centre for the teachers of the blind was set up at Bombay in 1963.

PHYSICAL EDUCATION, GAMES AND YOUTH WELFARE

The main object of the schemes in the field is to consolidate and extend programmes of physical education, games and sports and youth

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welfare. Following are the main institutions and plans for physical education—(1) *Lakshmi Bai College of Physical Education, Gwalior*, started in 1957, is a national institution to provide three-year degree course in physical education; (2) *National Physical Efficiency Drive* was launched by the Government of India in 1960 for activating interest in physical fitness and for arousing the enthusiasm for higher standards of physical efficiency and achievement; (3) *Grants-in-aid* to private physical education institutions and (4) *Promotion of Yoga*. The *Central Advisory Board of Physical Education and Recreation* has been reconstituted to advise the Government on the coordination of all programmes and activities in the field of physical education.

Games & Sports— (1) *National Institute of Sports* began to function in March, 1961. It is located at the Motibagh Estate, Patiala. Rajkumari sports teaching schemes were merged into National Institute of Sports from 1961. 548 trainees have so far been qualified as coaches from the Institute in various games and sports. (2) Assistance to National Sports Federation Association; (3) Construction of Stadia; (4) Establishment of Sports Village; (5) *Arjuna Awards* for honouring selected sportsmen of the year in each major game. Financial assistance is given for the promotion of sports and games and also for the construction of stadia, etc. *All India Council of Sports*, established in 1954, advises the Government of India and Sports Federations in the matter of development of games and sports.

National Discipline Scheme—was introduced in July, 1954 to bring up younger generation under proper code of discipline and to instil in them ideals of good citizenship and comradeship. It is meant for the physical and general social training to make younger generation healthy, both in body and in mind. The scheme has been extended in a large number of schools in several States.

Youth Welfare— The main objects in organising youth welfare programmes are two—(1) promotion of inter-State understanding and (2) development of the Spirit of Nationhood in the youth of the country.

Scouts and Guides—Financial assistance is given to the Bharat Scouts and Guides for their various activities. Rs. 2.20 lakh has already been given to them.

Labour and Social Service Scheme—has been in operation from the fourth year of the First Plan. It is divided into two parts—(1) Labour and Social Service Camps and (2) Campus Work Projects.

Students' Tours—Under this scheme, students of the age-range 15-24 years are given assistance to meet rail/bus fares at students' concession rates subject to a maximum of Rs. 60 per student, to visit historical, cultural or educational places of interest. *Central Committee on Youth Hostels* was set up to supervise youth hostel movement and give it the right direction. *Youth Leadership and Dramatic Training Camps* are designed to impart short-term training to college/university teachers in youth leadership and in the technique of drama production. *Bal Bhavan and National Children's Museum* has been established as a pilot project at New Delhi. The museum is a supplement to Bal Bhavan Organisation of annual *Inter-University Youth Festivals*. Setting up of non-student youth clubs and centres have been undertaken.

SCHOLARSHIPS

The Union Government have evolved a large programme of scholarships for study in India and abroad. The various scholarship schemes have been classified into following five sections :

1. Scholarships for Indian Nationals for Study in India—

National Scholarships Scheme for Post-Matric Education—Instituted in 1961-62, the scheme provides for the award of 2,650 scholarships each year, which comprise 1,820 at the school-leaving stage, 400 at the post-Intermediate stage and 430 at the post-graduate stage.

Scholarships for the Children of Primary and Secondary School Teachers for Post-Matric Studies—Instituted in 1961-62, this scheme provides for the award of 500 scholarships.

Post-Matric Scholarships Scheme—This scheme has been replaced by the National Scholarships Scheme.

Post-Graduate Scholarships in Humanities—This scheme has been amalgamated with the National Scholarships Scheme from 1963-64 and 80 scholarships per year available under it are being given under the National Scholarships Scheme since that year.

Post-Graduate Scholarships in Science—This scheme also has been amalgamated with the National Scholarships Scheme from 1963-64 and 150 awards per year available under it are being awarded under the National Scholarships Scheme from that year.

National Loan Scholarship Scheme—has been instituted since 1963-64 and provides for the award of interest-free loan scholarships to students. tenable for the completion of the course. The loan is recoverable in monthly instalments commencing one year after the loanee secures employment.

Scholarships in Residential Schools—are designed to provide opportunities of good school education to those who would not otherwise be in a position to afford it.

Scholarships to Young Workers in Different Cultural Fields—50 scholarships are awarded every year for advanced training in Hindusthani Music, Karnatak Music, Rabindra Sangeet, Folk Song, Drama and Fine Arts, etc. The value of each scholarship is Rs. 250 per month. At present, 68 scholars are receiving training under this scheme.

Scholarships and other Educational Facilities to the Children of Political Sufferers.

Scholarships for Students of Socially and Economically Backward Classes for Post-Matriculation Studies.

Scholarships for Cadets from Union Territories studying in the R.I.M.C., Dehra Dun—Under this scheme two scholarships are awarded annually.

Scholarships to Students from non-Hindi Speaking States for Post-Matric Studies in Hindi—During 1964-65, 1,000 scholarships have been awarded.

Award of Research Scholarships to the Products of Traditional Sanskrit Pathshalas.

Award of Merit Scholarships to Students studying Sanskrit in High/Higher Secondary Schools.

Fellowships/Scholarships and Stipends for Scientific Research and Prac-

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tical Training—To encourage brilliant, young scholars to do research in science at the highest level, Research Fellowships of Rs. 400 p. m. for a period of 3-5 years are awarded to post-doctoral degree holders. Under the *Research Training Scholarships Scheme* which aims to promote scientific and industrial research in the universities and other institutions and to train research workers, 800 scholars are working at different universities and research institutions. Scholarships of Rs. 250 p. m. and tenable for 3-4 years are available under the scheme.

Merit-cum-Means Scholarships—are awarded to meritorious students whose family income *per capita* does not exceed Rs. 125 p. m. Scholarships at the rate of Rs. 75 and Rs. 50 p. m. for the degree and diploma courses respectively are given under this scheme.

Practical Training Stipends Scheme—Under this scheme, Senior and Junior stipends of Rs. 150 and Rs. 100 p. m. respectively for diploma holders are available for 1-2 years for organised practical training.

Fellowships/Scholarships offered by Council of Scientific and Industrial Research and Surveys.

2. Scholarships for Indian Nationals for Study Abroad—

(a) Government of India Scheme—*Foreign Languages Scholarships Scheme, Overseas Scholarships for Scheduled Castes and Scheduled Tribes and Economically Backward Classes, Passage Grants for Scheduled Castes and Scheduled Tribes and other Economically Backward Classes, Union Territories Overseas Scholarships, Partial Financial Assistance (Loan Scheme)*; (b) Commonwealth Scholarships and Fellowships Plan and Commonwealth Education Cooperation Scheme—to enrich countries of the Commonwealth by enabling and increasing number of its able citizens to share the wide range of educational resources available throughout the Commonwealth and thus promote equality of educational opportunities at the higher level; (c) Scholarships offered by Foreign Governments/Institutions Organisations—*Foreign Governments*—Belgium, Bulgaria, Czechoslovakia, France, German Democratic Republic, Federal Republic of Germany, Hungary, Japan, the Netherlands, Rumania, Sweden, Switzerland, Turkey, United Kingdom. U.S.S.R. *Institutions/Organisations*—German Academic Exchange Service of the Federal Republic of Germany; Minna James Heinemann Foundation, Hannover; Research Institute of Electrical Communications, Tohoku University, Japan; Royal Commission Science Research London Exhibition of 1851; Federation of British Industries Overseas Scholarship for Practical Training.

3. Scholarships for Students belonging to Scheduled Castes, Scheduled Tribes and other Backward classes—

(a) *Scholarships Scheme for Post-Matriculation Studies in India*; (b) *Overseas Scholarships*; (c) *Passage Grants*.

4. Programme of Exchange of Scholars—

With a view to promote cultural relations with foreign countries, the Government of India have entered into agreements on exchange of scholars with certain countries, such as, Bulgaria, Ceylon, Greece, Poland, Rumania, U.A.R., U.S.S.R., Yugoslavia.

5. Scholarships for Foreign Nationals for Study in India.

SOCIAL AND CHILD WELFARE—The important measures in the field of social work include streamlining the schemes of the *Central Social Welfare Board*; strengthening training programmes for social work and encouraging voluntary organisations in various welfare activities. The following are the main programmes of : (1) *Social Welfare*—(a) Survey and Research programme, (b) Social and Moral Hygiene and after-care programme, (c) Assistance to voluntary organisations of social welfare. (2) *Child Welfare*—(a) Integrated services for child welfare; (b) Establishment of Balsevika training centre, The *Central Social Welfare Board* is established with a view to providing representation to all the States. The main activities of the Board are as follows : (a) grants-in-aid programme; (b) welfare extension projects; (c) condensed course of education for adult women; (d) socio-economic programme for women; (e) production units for small industries; (f) industrial co-operative societies; (g) handicrafts units; (h) holiday homes; (i) child welfare programmes, etc.

DEVELOPMENT OF HINDI—Various schemes are under work for development of Hindi, such as—(a) Publication of revised and critical editions of standard Hindi works, (b) Evolving a standard system of Hindi shorthand, (c) Compilation of a Hindi encyclopaedia in 10 volumes by the Nagari Pracharini Sabha at a total cost of Rs. 11.67 lakh, (d) Preparation of standard manuals in different subjects, (e) Grants to State Governments in non-Hindi-speaking areas and to voluntary organisations for promotion of Hindi and appointment of Hindi teachers. Grants totalling Rs. 11,40,000 have been given to voluntary organisations during 1964-65. Hindi Teachers' Trainings: Colleges are opened in Kerala, Gujarat, Mysore, Madras, Andhra, Maharashtra and West Bengal. The entire expenditure on the establishment and maintenance of such colleges is met by the Union Government, (f) Preparation of lists containing words common to Hindi and other regional languages, (g) Award of prizes to Hindi books of outstanding merit written by writers belonging to non-Hindi-speaking areas, (h) Translation of standard works in foreign languages into Hindi, (i) Finalisation of the form of Devnagari script, (j) Organisation of lecture tours of scholars from Hindi-speaking areas to non-Hindi-speaking areas and *vice versa*, (k) Preparation of bi-lingual alphabet charts in Hindi and other regional languages, (l) Free supply of Hindi books to schools, colleges and public libraries in non-Hindi-speaking States, (m) Organisation of an exhibition of scientific and technical literature in Hindi in various places, (n) Establishment of a standing commission for scientific and technical terminology, (o) Establishment of the *Central Hindi Directorate* and its regional offices for propagation of Hindi, (p) Establishment of Chairs of Indian Studies (particularly Hindi) abroad, (q) Teaching of Hindi to foreign students studying in India, (r) Terminology work conducted by the Commission for Scientific and Technical Terminology.

DEVELOPMENT OF SANSKRIT—There is a *Central Sanskrit Board* for the promotion and development of Sanskrit in the following manner—financial assistance to voluntary Sanskrit organisations, Gurukulas and Sanskrit Pandits in indigent circumstances; maintenance of Kendriya Sanskrit Vidyapith, Tirupati; reprinting of important out-of-print Sanskrit books, preparation of a Sanskrit dictionary based on historical prin-

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ciple ; award of research scholarships ; financial assistance to eminent Sanskrit Pandits, etc.

Under the cheme of financial assistance to voluntary Sanskrit organisations, grants amounting to 2,06,100 have been sanctioned so far. Under the scheme of grant of financial assistance to Gurukulas, grants amounting to Rs. 1,32,250 have been sanctioned so far. Grants amounting to about Rs. 46,900 have been paid so far for the publication of critical edition of rare manuscripts and compilation and publication of catalogues of ancient manuscripts.

DEVELOPMENT OF MODERN INDIAN LANGUAGES— The scheme envisages development of all modern Indian languages mentioned in the Constitution, excluding Hindi and including Sindhi.

INDIAN NATIONAL COMMISSION FOR CO-OPERATION WITH UNESCO—is an agency established by the Government of India with the three-fold task of promoting the understanding of the aims and objects of UNESCO, or acting as a liaison agency between UNESCO and the institutions working for the advancement of education, science and culture and of advising the Government on matters relating to UNESCO. The Commission was established in 1949. The Minister of Education is the President of the Commission which has five Sub-Commissions—Education, Natural Sciences, Social Sciences, Cultural Activities and Humanities and Mass-Communication. The Education Secretary of the Government of India is the Secretary-General of the Commission.

The Commission has developed a programme of activities in fulfilment of the functions assigned to it. For the promotion of the understanding of the aims and objects of UNESCO, the Commission's work-plans are centered round the following activities : Dissemination of information about the aims, objects and programmes of UNESCO ; Organisation of varied activities to popularise UNESCO ; implementation of UNESCO programmes. The Commission is responsible for receiving and arranging the programme of scholars and artists coming under different programmes of UNESCO for observation, training and studies in India.

NATIONAL ARCHIVES OF INDIA— It is the only archival repository of the Government of India in which are housed all important records from the early days of the East India Company. It is responsible for the preservation of records by up-to-date scientific processes. Its main functions are accession, repair and preservation of records, research and technical service, training, publication, etc. The Advisory Bodies and Committees of the National Archives are—(1) Indian Historical Records Commission, (2) Research and Publication Committee, (3) Advisory Committee on National Register of Records, (4) Committee on Archival Legislation. Training is given to candidates for one-year diploma course in Archives keeping. There is also a National Committee of Archivists.

RESEARCH AND TRAINING— The *National Council of Educational Research and Training* was established as an autonomous body in 1961, with the function of (1) undertaking, aiding and promoting research in all branches of education ; (2) organising advanced pre-service and in-service training and disseminating improved techniques and practices ; (3)

organising extension service for institutions engaged in educational research and training of teachers and (4) developing and improving multi-purpose secondary education.

The main agencies of the Council are the *National Institute of Education*, consisting of 9 departments, at New Delhi and the four *Regional Colleges of Education* at Ajmer, Bhubaneswar, Bhopal and Mysore.

OTHER EDUCATIONAL ACTIVITIES

The other activities of the Ministry of Education are as follows—(1) *Emotional Integration Scheme*. (2) *National Foundation for Teachers' Welfare* for the welfare of the teachers generally and to alleviate distress among teachers and their dependents. (3) *National Boards for Teachers* for the object of raising the prestige of the teaching profession. (4) *Promotion of Gandhian Philosophy*. (5) *Moral and Religious Instruction*. (6) *Education of the Tibetan Children*. (7) *Educational delegation to and from India*. (8) *Clearing House Functions*—one of the major responsibilities of the Education Ministry is to serve as a clearing house of ideas and information in all fields of education. It includes (a) *Information section*, (b) *Statistical section*, (c) *Publication section*, (d) *Plan Co-ordination Unit*, (e) *Central Secretariat Library*, (f) *Grants to Hostels, Institutions and Organisations outside India*, (g) *Special Employment Exchanges for the Physically Handicapped*. (9) *National Awards for Teachers*. (10) *Jallianwala Bagh National Memorial Trust, Amritsar*. (11) *The Ladakh Institute*. (12) *Nehru Memorial Museum and Library*. (13) *Preparation of "Who's Who" of Persons, who took part in the struggle for freedom*. (14) *History of Freedom Movement*. (15) *Purchase of Ancient Manuscripts*. (16) *The International Centre for the Study of the Preservation and the Restoration of the Cultural Property, Rome*. (17) *Copyright*. (18) *Recovery and Remission of Educational Loans to Displaced Students*. (19) *Raising of NCC Troops*. (20) *Grants to Hostels, Institutions, etc. outside India*.

UNIVERSITIES AND VICE-CHANCELLORS

University	
Agra University, Agra (1927)	...
Aligarh Muslim University, Aligarh (1921)	...
Allahabad University, Allahabad (1887)	...
Andhra Pradesh Agri. University, Rajendra Nagar, Hyderabad (1964)	...
Andhra University, Waltair (1926)	...
Annamalai University, Annamalainagar P.O. (1929)	...
Banaras Hindu University, Varanasi (1916)	...
Bangalore University, Bangalore (1964)	...

Vice-Chancellor	
Dr. Shri Ranjan.	...
Nawab Ali Yavar Jung.	...
R. K. Nehru.	...
O. Pulla Reddi.	...
Dr. A. L. Narayan.	...
Dr. C. P. Ramaswami Aiyar.	...
N. H. Bhagwati.	...
Dr. B. D. Laroia.	...

University

Vice-Chancellor

Bhagalpur University, Bhagalpur, Bihar (1960) ...	Dr. Bhirgunath Narayan Singh.
Bihar University, Muzaffarpur, Bihar (1952) ...	Dr. P. L. Shrivastava.
Bombay University, Bombay (1857)	Dr. R. V. Sathé.
Burdwan University, Burdwan, West Bengal (1960) ...	Dr. D. M. Sen.
Calcutta University, Calcutta (1857)	B. Mallick.
Delhi University, Delhi (1922) ...	Dr. C. D. Deshmukha.
Gauhati University, Gauhati (1948)	Dr. M. N. Goswami.
Gorakhpur University, Gorakhpur (1957) ...	Prof. Madan Mohan.
Gujarat University, Ahmedabad (1950) ...	Lalbhaji Ratanji Desai.
Indira Kala Sangeet Vishwavidyalaya, Khairagarh, M.P. (1956) ...	P. N. Chinchore.
Indore University, Indore (1964)	H. S. Kamath.
Jabalpur University, Jabalpur (1957)	Dr. Dharendra Verma.
Jadavpur University, Calcutta (1955)	Dr. T. Sen.
Jammu and Kashmir University, Srinagar (1948) ...	T. M. Advani.
Jawaharlal Nehru Krishi Vishwavidyalaya, Jabalpur (1964) ...	Dr. J. S. Patel.
Jiwaji University, Gwalior (1964)	S. S. Bhandarkar.
Jodhpur University, Jodhpur (1962)	Dr. Ram Behari.
Kalyani University, P.O. Kalyani, W. B. (1960) ...	Dr. S. N. Das Gupta.
Kameshwar Singh Sanskrit University, Darbhanga (1961) ...	Mahamahopadhyaya Sh. Shridhar Vasudev.
Karnatak University, Dharwar, Mysore (1949) ...	Dr. C. Pavate.
Kerala University, Trivandrum (1937) ...	Samuel Mathai.
Kurukshetra University, Kurukshetra (1956) ...	Dr. Bool Chand.
Lucknow University, Lucknow (1921)	Dr. A. V. Rao.
Madras University, Madras (1857)	Dr. A. L. Mudaliar.
Magadh University, Bodh-Gaya, Bihar (1962) ...	Zawar Hussain.
Maharaja Sayajirao University of Baroda, Baroda (1949) ...	Dr. C. S. Patel.

Marathwada University, Aurangabad (1958) ...	Dr. N. R. Tawde.
Mysore University, Mysore (1916)	Dr. K. L. Shrimali.
Nagpur University, Nagpur (1923)	P. P. Deo.
North Bengal University, P.O. North Bengal University, Raja Rammohanpur, Distt. Darjeeling (1962) ...	B. N. Das Gupta.
Orissa University of Agriculture and Technology, Bhubaneshwar (1962)	Mahesha Chandra Pradhan.
Osmania University, Hyderabad (1918) ...	Dr. D. S. Reddi.
Patna University, Patna (1917) ...	Dr. K. K. Datta.
Poona University, Poona (1949) ...	Suraj Bhan.
Punjab University, Chandigarh (1947)	P. N. Thapar.
Punjab Agricultural University, Ludhiana (1962) ...	Kirpal Singh Narang.
Punjab University, Patiala (1962)	H. Banerjee.
Rabindra-Bharati, Calcutta (1962)	Dr. Mohan Sinha Mehta.
Rajasthan University, Jaipur (1947)	Sarangdhar Sinha.
Ranchi University, Ranchi (1960)	Dr. Babu Ram Saxena.
Ravi Shankar University, Raipur, M. P. (1964) ...	G. Pande.
Roorkee University, Roorkee (1949)	I. I. Patel.
Sardar Vallabhbhai Vidyapeeth, Vallabh Vidyanagar, via Anand (1955) ...	Prof. M. P. Sharma.
Sagar University, Sagar (1946) ...	Dr. A. G. Pawar.
Shivaji University, Kolhapur (1962)	Dr. Promila V. Thackersey.
Shrimati Nathibai Damodar Thackersey Women's University, Bombay (1951) ...	Dr. V. C. Vamana Rao.
Sri Venkateswara University, Tirupati, A.P. (1954) ...	Dr. G. S. Mahajani.
Udaipur University, Udaipur (1962)	Dr. K. C. Naik.
University of Agricultural Sciences, Hebbal, Bangalore (1964) ...	Dr. Pran Krushna Parija.
Utkal University, Vani Vihar, Bhubaneswar, Orissa (1943) ...	B. B. Singh.
U. P. Agricultural University, Pant Nagar, P. O. Phoolbagh, Distt. Nainital, U.P. (1960) ...	S. N. M. Tripathi.
Varanaseya Sanskrit Vishwavidyalaya, Varanasi (1958) ...	

*Universities**Vice-Chancellor*

Vikram University, Ujjain (1957) ...	N. D. Bajpayee
Visva-Bharati, Santiniketan (1951)	Dr. Kalidas Bhattacharya.

INSTITUTIONS DEEMED TO BE UNIVERSITIES*Institutions**Director/Vice-Chancellor*

Birla Institute of Technology & Sciences, Pilani (1964) ...	Dr. V. Lakshmi Narayanan.
Gujarat Vidyapith, Ahmedabad (1963) ...	Thakorbhai Desai.
Gurukul Kangri Vishwavidyalaya, Hardwar (1962) ...	Satyavrata Siddhantalankar.
Indian Agricultural Research Institute, New Delhi (1958) ...	Dr. A. B. Joshi.
Indian Institute of Science, Bangalore (1958) ...	Dr. S. Dhawan.
Indian School of International Studies, New Delhi (1961) ...	Dr. M. S. Rajan.
Jamia Millia Islamia, New Delhi (1962) ...	Dr. M. Mujeeb.
Kashi Vidyapeeth, Varanasi (1963)	Birbal Singh.
Tata Institute of Social Sciences, Bombay (1964) ...	Dr. M. S. Gore.

PRIMARY EDUCATION

	<i>No. of Schools</i>	<i>No. of Students on rolls</i>	<i>No. of Teachers</i>	<i>Direct Expenditure (crores of Rs.)</i>
1960-61 ...	3,30,397	2,66,42,253	7,41,695	73.44
1961-62 ...	3,51,799	2,93,44,795	7,95,324	82.42

SECONDARY EDUCATION

	<i>No. of Schools</i>	<i>No. of Students on rolls</i>	<i>No. of Teachers</i>	<i>Direct Expenditure (crores of Rs.)</i>
1960-61 ...	66,920	1,81,22,356	6,41,689	111.83
1961-62 ...	75,222	2,03,13,910	7,12,509	118.63

BASIC EDUCATION

<i>Number of Schools</i>		<i>1960-61</i>	<i>1961-62</i>
Junior basic ...	...	65,891	73,907
Senior basic ...	...	14,321	16,247
Post-basic ...	...	31	31

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<i>Number of Students</i>			
Junior basic	...	64,90,315	76,24,503
Senior basic	...	32,20,098	35,62,443
Post-basic	...	4,340	4,712
<i>Number of Teachers</i>			
Junior basic	...	1,61,339	1,96,082
Senior basic	...	1,02,643	1,11,726
Post-basic	...	242	240

SOURCES OF EXPENDITURE, 1961-62*(In crores of Rupees)*

Govt. Funds	...	267.5	Fees	...	65.4
District Board Funds	...	14.2	Endowments	...	10.0
Municipal Board Funds	...	12.1	Others	...	22.7

2. SCIENCE

SCIENTIFIC RESEARCH IN INDIA— India, with a long tradition of scientific research, bears witness to the high quality of research in many branches of science. But in the Middle Ages, India began to lose her pre-eminence among the nations of the world. In consequence, the country remained backward in many respects. Official patronage was denied to science but it found devotees among people. Circumstances, however, compelled the British to reverse their policy. With the advent of World War II, India became the supply base for the allied forces in the Middle and Far East. So the Government of India sought the aid of science to make the most of the resources available within the country. Accordingly, the *Board of Scientific and Industrial Research* was set up in 1940. After this came the *Council of Scientific and Industrial Research* in April, 1942. With the advent of independence on August 15, 1947, a separate portfolio was created for scientific research under the direct charge of the late Prime Minister Nehru. This was followed by the creation of the Department of Scientific Research on June 1, 1948, followed by the institution of a Ministry of National Resources and Scientific Research in 1951. On the bifurcation of the Ministry of Education and Scientific Research on 5th April, 1958, the new Ministry of Scientific Research and Cultural Affairs was started on 10th April, 1958. This was again reversed in 1963 when the Ministry of Scientific Research and Cultural Affairs ceased to exist. The Ministry of Education was reconstituted with two departments of Education and Science. These two Departments were abolished in February, 1964 to form a composite Ministry of Education.

GOVERNMENT OF INDIA'S SCIENTIFIC POLICY— The Government of India announced its scientific policy on March 4, 1958 in the following terms—(1) to foster, promote and sustain, by all appropriate means, the cultivation of science and scientific research in all its aspects—pure, applied and educational. (2) To ensure an adequate supply, within the country, of research-scientists of the highest quality, and to recognise their work as an important component of the strength of the

nation. (3) To encourage and initiate, with all possible speed, programmes for the training of scientific and technical personnel on a scale adequate to fulfil the country's needs in science and education, agriculture and industry, and defence. (4) To ensure that creative talent of men and women is encouraged and finds full scope of scientific activity. (5) To encourage individual initiative for the acquisition and dissemination of knowledge, and for the discovery of new knowledge in an atmosphere of academic freedom. (6) And, in general, to secure for the people of the country, all the benefits that can accrue from the acquisition and application of scientific knowledge.

COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH—

The scientific research under the Government of India is carried on mainly through the *Council of Scientific and Industrial Research*, set up in 1942 as an autonomous body and the various national laboratories or research institutes aided by the Council. National laboratories have been set up under its control. Its functions are : (a) promotion, guidance and co-operation of scientific and industrial research in India ; (b) establishment, assistance and development to special institutions or departments of existing institutions for scientific study of problems affecting the industries and trades ; (c) establishment and award of research studentships and fellowships ; (d) utilisation of the results of the researches conducted under the auspices of the Council towards the development of industries in the country ; (e) establishment, maintenance and management of laboratories, workshops and organisations, to further scientific and industrial research for the use of Indian industries ; (f) collection and spread of information in regard not only to research but also to industrial matters generally ; (g) publication of scientific papers and a journal of Industrial Research and Development.

It maintains a *National Register of Scientific and Technical Personnel* in the country and has also the responsibility of administering the "Post for temporary placement of well-qualified Indian scientists and technologists returning from abroad."

The Council is administered by a governing body with the Prime Minister as its President and the Education Minister as Vice-President, non-officials representing science, business and industry as well as the representatives of the Ministry of Finance. The Government Departments interested in the industrial research are also represented.

The Council is mainly financed by the Union Government. It has also income from royalties and premia on processes leased out, sale of publications, fees and charges levied for consultation, testing, etc. It receives gifts of land, buildings and finances from State Governments and others, and donations from businessmen.

The Council of Scientific and Industrial Research has extended its activities in various directions. *Research Co-ordination, Industrial Liaison and Extension Unit* maintains suitably documented information on the progress of research in the National Laboratories and assists internal co-ordination between the National Laboratories/Institutes and the CSIR. The unit maintains external co-ordination with other research organisations, such as the Railways, Indian Council of Agricultural Research, Indian

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 Council of Medical Research etc. *Survey and Planning of Scientific Research Unit* was set up in March 1963 for the purpose of collecting data and information on proper planning of research. *Designing and Engineering Unit* provides assistance to the National Laboratories in the translation of laboratory result into industrial practice, evaluation of the processes developed in the laboratories from commercial point of view, designing of pilot and industrial plants based on these processes. *Defence Co-ordination Unit* was set up in 1962 for co-ordinating the activities of the CSIR Laboratories pertaining to defence problems, studying the defence requirements of imported strategic items, identifying the problems on which research and development work could be started on top priority basis. The *National Register* has enrolled the names of Indian scientists in India and abroad. *Indian National Scientific Documentation Centre (Insdoc)* was established in 1951 and is located at the National Physical Laboratory, New Delhi. The Centre provides documentation services to National Laboratories, scientific institutions, universities and industrial concerns. It is a national repository for reports of scientific work carried out in the country, whether published or unpublished.

Besides fostering research in its own National Laboratories/Institutes etc., the CSIR provides grants-in-aid for *ad-hoc* research schemes in universities, technical institutions and industrial laboratories. During 1964-66, grants-in-aid for 665 *ad-hoc* research schemes were given. The Council issues scientific and technical publications and gives scholarships and fellowships.

At present, 388 Senior and 1261 Junior Research Fellowships are tenable. Besides, there are 3 Senior and 4 Junior Research Fellows working in the *Hindi Unit* of CSIR, set up in 1964 with the idea of developing Hindi as a vehicle for disseminating scientific knowledge and for communicating such activities of the CSIR as are directly related to the economic development of the country.

It also receives international co-operation and assistance from Rockefeller Foundation and other institutions.

National Research Development Corporation of India—
 The objects and functions of the Corporation are to develop and exploit in the public interest for profit or otherwise : (a) all inventions of the Council of Scientific and Industrial Research, whether patentable or otherwise ; (b) all patents and inventions of other departments of Government of India including those of commodity research committees and other statutory research organisations including technical and engineering know-how of processes ; (c) such other patents as may be voluntarily assigned, by general or special agreements, by universities, research institutions or individuals ; and (d) such other processes and patents, the development of which may be entrusted to the Corporation.

SCIENCE TALENT RESEARCH SCHEME— The scheme is sponsored by the National Council of Educational Research and Training of the Ministry of Education. It was introduced in 1962-63 on experimental basis.

The scheme seeks (1) to identify boys and girls with scientific aptitude at the secondary stage ; (2) to stimulate scientific talent among young

students by competitive process and (3) to encourage schools to take more active interest in teaching science. Under the scheme a competitive examination is held every year. Every district headquarters in the country has an examination centre. Any student in the final year of a secondary school or parallel institution is eligible for the examination, provided the student has obtained 55 per cent or more marks in science subjects (including mathematics whenever applicable) at the annual examination of the preceeding class.

Every year about 350 students are selected for scholarship and about 200 more for awarding merit certificate to help them for the three-year degree course in science. A scholarship-holder is given Rs. 50/- per month for the first year and Rs. 75/- per month for the next two years of the degree course besides a book allowance of Rs. 100/- every year for the three years.

NATIONAL LABORATORIES & INSTITUTES—The establishment of a chain of National Laboratories ranks as one of the major achievements in India since independence. These National Laboratories seek to supplement the work of other research institutions of the country. The following are the National Laboratories and Institutes :

National Physical Laboratory, New Delhi—conducts research on problems relating to physics, both fundamental and applied, maintenance of Standards. Testing facilities are also available here.

National Chemical Laboratory, Poona—Its functions are fundamental and applied research, covering the whole field of chemistry.

National Metallurgical Laboratory, Jamshedpur—It deals with fundamental and applied metallurgical research.

Central Fuel Research Institute, Jealgora (Bihar)—The Institute conducts fundamental and applied research on fuels—solid, liquid and gaseous. It has set up a coal gasification plant to convert coal and coke into gas for use as domestic fuel.

Central Glass and Ceramic Research Institute, Jadavpur, Calcutta—was established in August, 1950. The Institute conducts research on different aspects of glass and ceramics, pottery, porcelain, refractories and enamels; development of processes for manufacturing glass and ceramic articles; standardisation of raw materials used in the ceramic industry.

Central Road Research Institute, New Delhi—It conducts research on road materials, testing of road materials and road surfaces.

Central Food Technological Research Institute, Mysore City—for food processing and conservation of food, food engineering and all aspects of fruit technology. Regional fruit and vegetable preservation stations have been established at Trichur, Nagpur, Bombay and Lucknow.

Central Drug Research Institute, Lucknow—for all aspects of drug research including evaluation and standardisation of crude drugs, discovery of substitutes for pharmacopoeial drugs and plants, pharmaceutical and synthetic chemicals, bio-chemistry and bio-physics, infection, immunisation, pharmacology, etc.

Central Leather Research Institute, Madras—for fundamental and applied aspects of leather technology.

Central Electro-Chemical Research Institute, Karaikudi, Madras—for

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 research on different aspects of electro-chemistry, including electro-metal-lurgy, electro-deposition and allied problems.

Central Building Research Institute, Roorkee—for engineering and structural aspects of building and human comforts in relation to buildings,

Central Salt and Marine Chemical Research Institute, Bhavnagar—It carries investigation on production of pure salts, reduction in cost of production, economic utilization of by-products of salt manufacture, development of new methods and techniques for the recovery, production and utilization of marine and allied chemicals.

Central Electronics Engineering Research Institute, Pilani, Rajasthan—for design and construction of electronic equipment and components and test equipment.

National Botanic Gardens, Lucknow—for the collection and large-scale cultivation of economic and medicinal plants of industrial importance.

Central Mining Research Station, Dhanbad—Research in methods of mining, safety in mines and mine machinery.

Regional Research Laboratory, Hyderabad—Research on problems relating to the industries and raw materials of the area.

Indian Institute for Experimental Medicine, Calcutta—Research on various aspects of biochemistry as applied to medicine, bacteriology, etc.

Birla Industrial and Technological Museum, Calcutta—is a museum to depict scientific and technological advancement.

Regional Research Laboratory, Jammu-Tawai (Jammu & Kashmir)—Research on problems relating to the industries and raw materials of the area and research specially directed to medicinal plants of the Himalayas (Kashmir region).

Central Mechanical Engineering Research Institute, Durgapur, West Bengal—Research in mechanical engineering in all its aspects.

Central Public Health Engineering Research Institute, Nagpur—Research on all aspects of public health engineering and co-ordination of work of all interested agencies in this field in the country.

National Aeronautical Laboratory, Bangalore—Scientific investigation of the problems of flight with a view to their practical application to the design, construction and operation of aircraft in India.

Regional Research Laboratory, Jorhat—Research on problems relating to more efficient utilization and better conservation of important national resources of Assam and other regional needs posing special problems.

Central Indian Medicinal Plants Organisation, Lucknow—Co-ordination of activities in the development of cultivation and utilization of medicinal plants on an organised basis.

Central Scientific Instruments' Organisation, Chandigarh—Promotion and development of indigenous manufacture of scientific instruments for teaching, research and industry.

Indian Institute of Petroleum, Dehra Dun—Research in petroleum refining and processing of natural gas, petro-chemicals, etc.

National Geophysical Research Institute, Hyderabad—Correlation of the field data in all fundamental aspects of geology and geophysics.

Visvesvaraiya Industrial & Technological Museum, Bangalore—is a museum to depict scientific and technological advancement.

Indian Ocean Expedition, New Delhi—Research on various aspects of physical, biological, geological and chemical oceanography.

Mafatlal Scientific and Technological Museum, Bombay—is a museum to depict scientific and technological advancement.

Regional Research Laboratory, Bhubaneshwar—Research on problems relating to the industries and raw materials of the region.

National Biological Laboratory, Palambur (Kangra)—Both fundamental and applied research on modern aspects of biological sciences.

Indian National Scientific Documentation Centre, New Delhi—to provide full range of documentation services.

SPONSORED RESEARCH— Scientists in technical institutes, industrial laboratories and universities are enabled to pursue fundamental and applied researches and develop their own special fields through a liberal system of grants-in-aid. There are, at present, more than 600 such schemes in progress.

Co-operative Research Organisations in different industrial fields are being assisted in their capital and recurring expenditure and by way of technical advice, etc. Ten such associations are now functioning in different fields of industry.

Liaison Units— have been set up in most of the laboratories to maintain contact with the industry, industrial and trade associations, Government departments and other users of research. An *Industrial Liaison and Extension Service Unit* is maintained at New Delhi.

VIGYAN MANDIRS— The object of this scheme is to make the village people familiar with the scientific principles involved in their day-to-day problems of agriculture, crop-protection, village sanitation, etc. Each Vigyan Mandir has a small museum and a laboratory for conducting simple analyses of soil, water and food. So far 50 Vigyan Mandirs have been set up generally at sites covered by community development projects. Since April, 1963, administrative control of these has been transferred to State Governments and Union Territories.

DEPARTMENTAL RESEARCH ACTIVITIES

There are eleven *Hydraulic Stations* under the Central Board of Irrigation and Power. The Central Water, Power and Irrigation Research Centre, Khadakvasla (near Poona), is the pioneer hydraulic research station in India.

Botanical Survey of India, Calcutta— It functions to explore the plant resources of the country by systematic surveys. Systematic surveys of the floras of the country in under-explored and unexplored areas are undertaken by this organisation. It also undertakes to reprint flora and other publications. The Botanical Survey of India has now under it the following organisations—(1) Office of the Chief Botanist, Calcutta, (2) Central National Herbarium, Botanical Garden, near Calcutta, (3) Botanical Galleries in Indian Museum, Calcutta; (4) Industrial Section of the Indian Museum, Calcutta; (5) Central Botanical Laboratory, Allahabad; (6) Five regional circles, with headquarters at Dehra Dun, Coimbatore, Poona, Allahabad and Shillong.

The Botanical Garden at Shibpur, near Calcutta, has been taken up by the Government of India.

Zoological Survey of India, Calcutta— was started in 1916. It conducts research in systematic zoology, animal ecology, geography and famistic surveys. Six regional stations have been established at Shillong, Poona, Jabalpur, Jodhpur, Madras and Dehra Dun.

Geological Survey of India, Calcutta— was established more than hundred years ago and is responsible for preparation of the geological map of India. The field work of the Survey is conducted through eight regional circles.

Anthropological Survey of India, Calcutta— India is one of the earliest countries in the world to start anthropological survey in 1905. But the work was prematurely closed down. A Department of Anthropology was started in Calcutta University in 1921. In 1945, a nucleus of the Anthropological Department was established by the Government of India. It is responsible for conducting anthropological surveys including social, psychological, economic, linguistic, physical, genetic and instructional investigations.

Survey of India—has its headquarters at Dehra Dun to carry on topographical surveys and to prepare up-to-date maps. The officers of the Department are trained at the Survey Training School at Dehra Dun. The work of the Survey of India is carried on by 4 circles—Northern, Western, Eastern and Southern.

RESEARCH INSTITUTES

Forest Research Institute at Dehra Dun carries on research in the utilisation of timber for constructional purposes.

All India Radio maintains a research establishment in New Delhi to investigate problems relating to propagation and reception of radio waves and the design and performance of radio receivers.

Railway Board has established a research centre at Lucknow with substations at Lonavala and Chittaranjan to investigate problems referred to them by railway workshops and the Central Standards Office (Railways).

Roads Organisation under the Ministry of Transport deals with the problems of road development and road materials, highways and bridge-engineering, ports and harbours, etc.

Indian Standards Institution under the Ministry of Industry lays down standard specifications for materials, products, practices, etc. and promotes quality control. It issues licences to manufacturers for providing third-party guarantee about quality of products.

OTHER RESEARCHES

Atomic Energy and Space Research—See *Index*.

Engineering Research— With a view to initiating and co-ordinating research on different engineering subjects, the *Board of Engineering Research* was inaugurated in 1950. The Board is assisted by 5 expert committees—(1) Civil Engineering Committee, (2) Mechanical Engineering Committee, (3) Electrical and Radio Engineering Committee, (4) Hydraulics Committee and (5) Aeronautical Engineering Committee.

Medical Research— Medical research is conducted chiefly under the auspices of the *Indian Council of Medical Research* founded in 1912 in New Delhi. It maintains the Nutrition Research Laboratories at Hyderabad, the Tuberculosis Chemotherapy Centre at Madras, the Virus Research Centre at Poona and the Blood Group Reference Centre at Bombay. It provides grants-in-aid, disseminates information on medical research and publishes journals. The country has a number of specialised institutions, such as (1) *National Malaria Institute*, Delhi; (2) *All India Institute of Hygiene and Public Health*, Calcutta; (3) *School of Tropical Medicine*, Calcutta; (4) *Patel Chest Institute*, Delhi; (5) *Central Leprosy Research Institute*, Madras; (6) *Haffkine Institute*, Bombay; (7) *Indian Cancer Research Centre*, Bombay; (8) *Central Research Institute*, Kasauli; (9) *Pasteur Institute*, Coonoor; (10) *Central Drugs Laboratory*, Calcutta; (11) *King Institute of Preventive Medicine*, Guindy, Madras. There are also privately conducted research institutes like *Bengal Immunity Research Institute*, Calcutta, etc.

Agricultural Research— It had its beginning in 1929 with the starting of *Indian Council of Agricultural Research*. The primary function of the Council is to promote, guide and co-ordinate agricultural and animal husbandry education and research and its application through the institutions belonging to Central and State Governments, the universities and other institutions.

The following are the main Agricultural Institutes of India—(1) Forest Research Institute, Dehra Dun; (2) Indian Agricultural Research Institute, New Delhi; (3) Indian Veterinary Research Institutes, Mukteswar and Izatnagar (U.P.); (4) National Dairy Research Institute, Karnal (Punjab); (5) Sugar Research Institute, Coimbatore; (6) Central Rice Research Institute, Cuttack; (7) Cotton Technological Research Laboratory, Matunga, Bombay and its sub-station at Indore; (8) Central Jute Technological Research Laboratory, Calcutta; (9) Jute Agricultural Research Institute, Hooghly; (10) Indian Lac Research Institute, Ranchi; (11) Central Tobacco Research Institute, Rajahmundry; (12) Bidi Tobacco Research Station, Anand; (13) Central Inland Fisheries Research Station, Barrackpur; (14) Central Marine Fisheries Research Station, Mandapam; (15) Deep-Sea Fishing Research Station, Bombay; (16) Central Coconut Research Station, Kayamkulam, Travancore; (17) Central Potato Research Institute, Simla; (18) Central Vegetable Breeding Station, Kulu, Punjab; (19) Fruit Research Institute, Sabour, Bhagalpur; (20) Sugarcane Research Station, Poona; (21) Sugarcane Research Station, Shahjahanpur (U.P.); (22) Central Fisheries Technological Research Stations, Cochin and Ernakulam.

Other Research and Technical Institutions—most of these are private research institutions financed by private endowments and Government's assistance—(1) Bose Institute, Calcutta, (2) Birbal Sahani Institute of Palaeobotany, Lucknow, (3) Indian Association for the Cultivation of Science, Calcutta, (4) Indian Institute of Science, Bangalore, (5) Physical Research Laboratory, Ahmedabad, (6) Shri Ram Institute for Industrial Research, Delhi; (7) Maharashtra Association for the Cultivation of Science, Poona.

3. CULTURAL AFFAIRS

THREE AKADEMIES

Sahitya Akademi— or the National Academy of Letters was inaugurated by the Government of India on 12th March, 1954. The Government of India Resolution set forth the constitution of the Akademi as "a national organisation to work actively for the development of Indian letters and to set high literary standards, to foster and co-ordinate literary activities in all the Indian languages and to promote through them all the cultural unity of the country." The Akademi functions as an autonomous organisation. It is wholly financed by the Union Government.

The President of the Akademi is Dr. S. Radhakrishnan and Vice-President, Dr. Zakir Hussain. The supreme authority of the Akademi vests in the Central Council which consists of 70 members.

The general policy of the Sahitya Akademi and the basic principles of its programme are laid down by the General Council and are implemented under the direct supervision of the Executive Board. There is an Advisory Board for each language. There are, besides, special Editorial or Advisory Boards for specific projects. The tenure of the General Council is five years.

Besides the fourteen languages of the Constitution of India, the Sahitya Akademi has recognised English and Sindhi as languages in which its programme or part thereof may be implemented.

The Akademi has already published nearly 300 publications. Among them the following are worth mentioning: (1) *National Bibliography of Indian Literature* covering all books of merit published in the 20th century in 14 major languages of the Constitution. (2) Kalidasa's *Meghduta*, *Vikramorvasya*, and *Kumarasambhava*. (3) A history of Malayalam literature. (4) A history of Bengali literature. (5) Anthologies of Punjabi, Kashmiri, Malavalam, Tamil, Telugu, Urdu and Assamese poetry. (6) Vaishnava lyrics of Assam and Bengal. (7) One-act plays in Gujarati. (8) Short stories in Gujarati, Marathi, Hindi, Kannada, Sindhi, Tamil and Telugu. (9) Essays in Kannada. (10) Selection of Bharati's poems in Tamil. (11) Selections of Rajwade's and Agarkar's prose in Marathi. (12) Selections from Bharatchandra and Kshemanand in Bengali. (13) Diwan Kaurmal's prose in Sindhi. (14) Symposium on contemporary Indian literature. (15) Anthology of contemporary Indian short stories. (16) Russian-Hindi dictionary. (17) Histories of Assamese, Kannada and Oriya literatures. (18) Who's Who of Indian Writers. (19) National Bibliography of Indian Literature (1900-53) in 4 volumes. (20) Histories of literatures in various Indian languages—9 volumes inclusive of translations. (21) Anthologies of poetry, short stories, one-act plays, essays and folk songs in each of the major Indian languages—34 volumes inclusive of translations. (22) Short informative biographies of eminent Indian writers. (23) Bilingual and multilingual dictionaries.

The Akademi has published 211 volumes of translation of literary classics, both old and modern, from one Indian language into the other languages.

The Akademi selected classics for translation into different Indian lan-

guages. These include writings of Shakespeare, Milton, Walt Whitman, Thoreau, Moliere, Voltaire, Victor Hugo, Goethe, Ibsen, Tolstoy and several others. 84 volumes of such translations are published so far.

The Akademi publishes the following journals : (1) Indian Literature (in English) ; (2) Sanskrita Pratibha (in Sanskrit) ; (3) a monthly *News Bulletin* for free distribution.

Publications ready for printing or in preparation are as follows— (1) Kalidasa's Sakuntala, Malvikagnimitra and Raghuvamsa, (2) Seven volumes of an anthology of Sanskrit literature, (3) A Tibetan-Hindi dictionary, (4) A history of Telugu literature, (5) Collected works of Moulana Azad in 10 volumes, (6) Collected works of Sardar Pooran Singh.

Bharatiya Kabita—An anthology in two volumes of poems selected from each of the 14 languages along with Hindi translations has been published. Third volume covering the period of 1956-57 is in the press.

First six of the eight volumes of Tagore's works, covering 101 songs entitled *Ekottarasati* and 500 poems entitled *Gita Panchasati* have been published. Gujarati, Punjabi, Marathi and Oriya editions of *Ekvinsati* or collection of 21 short stories have also been released. The *Tagore Centenary Volume* was published in 1961. Translations of Romain Rolland's *The Life of Vivekananda* have been published.

The Akademi also makes annual awards of Rs. 5,000/- each to authors of outstanding books published in Indian languages and in English.

The Akademi maintains two regional offices in Calcutta and Madras.

Sangeet Natak Akademi— was inaugurated on January 28, 1953. The chief object of the Akademi is to foster and develop Indian dance, drama, music and to promote through them the cultural unity of the country. The Akademi also co-ordinates the activities of the regional organisations, promotes research, sets up training institutions and sponsors festivals and cultural exchanges in the field with institutions it has recognised and with affiliated regional akademis functioning in different States. It is wholly financed by the Union Government.

There are two training institutions of the Akademi—*The National School of Drama and Asian Theatre Institute*, New Delhi and *The Manipur Dance College*, Imphal. The Kathak Section of the *Bharatiya Kala Kendra*, New Delhi was taken over by the Akademi as the nucleus of a National School of Kathak Dance with effect from October 1, 1964.

Financial assistance to the extent of Rs. 5,69,205 was sanctioned by the Akademi to various institutions during 1964-65.

The Akademi makes annual national awards to outstanding artistes in the fields of dance, drama and music.

Lalit Kala Akademi— was inaugurated on August 5, 1954. The primary object of the Akademi is to encourage and promote study and research in the fields of painting, sculpture, architecture and other graphic arts. It is wholly financed by the Union Government.

The Akademi's activities fall under several heads, namely, National Exhibition of Art every year, exhibitions from abroad, Indian art exhibitions abroad, survey of folk arts and crafts, copying of frescos, publications programme, recognition of and aid to art organisations, etc.

The Akademi has brought out art publications, such as Mughal Miniatures, portfolio of contemporary painting, Krishna Legend in Pahari painting, Ajanta painting, Mewar painting, Kishangarh painting, Birbhum terracottas, Bundi painting, monographs on Bendre, Ravi Varma, Hebbar, Chhavda, Haldar, Panikar, Husain, Ramkinkar and P. Das Gupta, etc.

The Akademy also publishes two bi-annuals, namely, *Lalit Kala*, devoted to ancient Indian art and *Lalit Kala Contemporary*.

The Akademi makes annual awards to outstanding artists participating in the National Exhibition of Art.

The Akademy honours its Fellows with *Tamrapatra* (a copper plate), *Angavastra* (silk brocade) and Rs. 5,000 as a token of respect.

Grants-in-aid totalling Rs. 1,21,500 were granted by the Akademi to various institutions and State akademies.

NATIONAL BOOK TRUST— was set up in 1957 to encourage the production of good literature and to make such works available at moderate prices to libraries, educational institutions and the public. Till December 31, 1964 the Trust was sanctioned a sum of Rs. 3,20,000 as Government grant. The Trust had published 9 books during 1964-65 bringing the total number of books published upto 31st December, 1964 to 103.

CHILDREN'S BOOK TRUST— was formed few years ago by Government of India with the object of publishing children's literature in English, Hindi and regional languages. The Trust has already established a printing press for the production of books, etc.

Promotion of Inter-State Cultural Understanding— (1) Under the Inter-State Exchange of Cultural Troupes, troupes are sent to other States, (2) Exchange of Eminent Artistes/Troupes is being organised to promote understanding of the music and dance forms of the different regions of India, (3) Promotion of Drama Movement in the country by way of assistance to theatres for the production of new plays, study travel grants to theatre groups, professional training to qualified students who take to drama, maintenance grants to theatre groups, (4) Open-air theatres are being established in rural areas, (5) Theatre groups registered under Registration of Societies Act, 1860 and which have produced at least three separate dramas during previous five years, are provided grants under a scheme launched in 1960-61 to encourage the theatre in the country. Another scheme is in operation to offer assistance to professional theatres by way of meeting the deficit of the theatre groups on a matching basis by the Government of India and the State Governments. Registered cultural organisations are provided with grants for building purposes. Financial assistance is given to cultural societies to implement their programmes.

Cultural Relations with Other Countries— An External Relations Division has been established to promote better understanding and goodwill by means of *exchange of delegation* of artists, students, scholars, publications, exhibitions and art objects with other countries, as also through presentations of books, selection of Indian teachers for scientific training abroad, construction and maintenance of international students' houses and hostels, creation of chairs of Indology abroad and assistance for the publication of foreign translations of Indian classics.

Exhibitions of Indian art and culture are organised abroad.

Cultural agreements have been entered into with various foreign countries. At the moment India has cultural agreements with 17 countries.

Financial assistance in the form of *ad-hoc* grants was given to 20 societies and institutions in India and abroad.

Financial assistance has been given for the construction of International Students' Houses at Delhi and Santiniketan, Y.M.C.A., Indian Students' Union and Hostel, London, Crosby Hall, London, New Hall, Cambridge.

Indian Council for Cultural Relations— was established in November, 1949 with the object of establishing, reviving and strengthening cultural relations between India and other countries. It received a government grant of Rs. 12 lakh in 1964-65. Under *Cultural Exchange* programme, the Council receives a variety of visitors, plays hosts to several delegations, awards travel grants and organises exhibitions and lectures. The Council publishes three journals, viz. The Indo-Asian Culture, Thaqafatul Hindi and Cultural News from India.

DEVELOPMENT OF MODERN INDIAN LANGUAGES— The scheme envisages development of all the modern Indian languages mentioned in the Constitution excluding Hindi and including Sindhi. The scheme has now been expanded in scope. Central assistance under the scheme has been extended to State Governments and private literary organisations for approved projects upto 50 p.c. of the estimated expenditure towards the cost of publications.

ARCHAEOLOGICAL SURVEY OF INDIA— The main activities of this Survey are conservation of ancient monuments, explorations and excavations, examinations of epigraphical records, acquisition and preservation of cultural collections in various museums, dissemination of information about Indian culture through an extensive programme of publication.

MUSEUMS AND ART COLLECTIONS— There are some important museums in India. The Government of India had set up in 1956 the *Central Advisory Board of Museums* to advise the Government on matters relating to museums. The Scheme, 'Reorganisation and Development of Museums' is a continuing scheme. On its recommendations a scheme for the award of fellowships in Museology has been instituted to promote research work in museums. To begin with 3 fellowships of Rs. 250 p.m. have been awarded. The *National Museum* at New Delhi was opened in its permanent home at New Delhi. During 1964-65 art objects worth Rs. 2,78,466.87 paise were purchased by the National Museum. In its library nearly 5,000 books were added in 1964-65 bringing the total number of books accessioned to 14,000. The *Art Purchase Committee* for the three Central Museums, viz. the National Museum, New Delhi, the Indian Museum, Calcutta and the Salar Jung Museum, Hyderabad was constituted during 1963-64. There is an *Indian War Memorial Museum* at Red Fort, Delhi, set up in 1919, which is responsible for the preservation and maintenance of First World War exhibits kept therein. The *Indian Museum* at Calcutta is the premier museum of the country. It is managed by a Board of Trustees and consists of six sections, namely, Art, Archaeology, Anthropology, Industrial (Economic) Botany, Geology and Zoology. The *Victoria Memorial Hall* in Calcutta is also an historical museum. It accommodates exhibits mainly connected with the British period of Indian history.

It is managed by a Board of Trustees. Grant-in-aid of Rs. 2,09,500 has been released to Victoria Memorial Hall so far. The *National Gallery of Modern Art* was started at Jaipur House, Delhi in 1953 for the preservation of famous art collections of India. The function of the Gallery is to exhibit Indian pictorial and sculptural art from 1857. An Act to declare the *Salar Jung Museum* with *Salar Jung Library* at Hyderabad in Andhra Pradesh to be an institution of national importance and to provide for its administration, was passed in 1961 by Parliament. Rs. 42.20 lakh has been sanctioned for the construction of the new building of Salar Jung Museum. For the maintenance of the Museum, a grant of Rs. 3,00,000 has been released upto 31st December, 1964.

LIBRARIES— The following libraries are under the control of the Central Government : (1) *National Library* at Calcutta, regarded as the premier library of India, (2) *Central Reference Library* at Calcutta, which publishes annual volume of bibliography, (3) *Khuda Bux Oriental Public Library*, Patna, (4) *Central Library*, Bombay, (5) *Connemara Public Library*, Madras, (6) *Delhi Public Library*, (7) *Central Secretariat Library*, Delhi.

Financial Assistance to Eminent Writers & Artists in Indigent Circumstances—Schemes to assist persons who have made contributions in letters, art and such other walks of life, but are now in indigent circumstances by suitable monthly allowances/lump sum grants have been undertaken by the Central Government. From 1961 the State Governments share the expenses.

Grants—The following grants are also made by this Ministry :—(1) financial assistance to assist eminent writers in indigent circumstances, (2) *Adhoc* grants to cultural societies for purposes not covered by the National Academies, (3) Shankar's International Children's Competition, (4) Grants to cultural organisations, (5) Building grants to cultural organisations, (6) Grants for the preservation of sites and remains and memorials, (7) Grants for the maintenance of certain monuments.

PUBLIC HEALTH

MINISTRY OF HEALTH— Matters connected with Health fall largely in the State field. The Central Government's function in respect of matters in the State List is the co-ordination of policy and planning, the collection and exchange of information, expert technical assistance and advice on matters relating to hospitals, medical education, Local Self-Government or water-supply schemes and guidance on other matters of country-wide interest, such as drug legislation, prevention of food adulteration or control of epidemics. The Centre is directly responsible for State subjects in the Union Territories of Manipur, Delhi, Tripura, Himachal Pradesh, Goa, Daman & Diu, Pondicherry, Andaman and Nicobar Islands and Laccadive, Minicoy & Amindivi Islands. The Central Government also administers a number of important training institutions and other establishments in various places.

The Union Ministry of Health deals with all matters relating to Health

(inclusive of drugs control and prevention of food adulteration) and all matters relating to Local Self-Government and Town and Country Planning at the national level. It also deals with the national water-supply and sanitation scheme. The important subjects which are dealt with by the Central Government pertain to post-graduate medical education; the promotion of special studies in medicine and nutrition; port and airport health organisation; International Sanitary Regulations and India's relations with the W.H.O. etc.

Central Health Service— has been constituted with a view to securing uniformity of standards, pay scales and other conditions of service of medical and public health personnel.

DRUG MANUFACTURE & CONTROL

The control over the quality of drugs imported, manufactured, sold or distributed in the country is exercised under the *Drugs Act, 1940*, as amended in 1955, 1960, 1961 and 1962 and the Rules framed thereunder. The State Governments are responsible for the control over the quality of all drugs manufactured, sold or distributed in the country. The Government of India have powers to keep a check on the quality of imported drugs. The *Drugs Technical Advisory Board*, constituted under the *Drugs Act of 1940*, is an important statutory body, advising the Central and State Governments on technical matters arising out of the administration of the *Drugs Act of 1940*. *Drugs Consultative Committee* is a statutory committee appointed under the *Drugs Act* to advise Central and State Governments and the *Drugs Technical Advisory Board* on matters tending to secure uniformity throughout India in the administration of this Act. The first *Indian Pharmacopoeia* was published in 1955. The *Central Drugs Laboratory*, Calcutta, is a statutory institution set up under the *Drugs Act of 1940*, which analyses and tests samples of such drugs as are sent to it and performs other functions of the Central and State Governments. The *National Formulary of India* has been published to serve as a handbook of reference for members of the medical profession, pharmacists and hospitals. *Medical Stores Organisation* has depots in Madras, Calcutta, Bombay, Hyderabad and Karnal for supplying mainly hospitals and dispensaries run by the State Governments, local bodies, etc. The factories of the Organisation manufacture a large number of drugs and dressings. It has also a repair workshop. The training of trade representatives continues in Government Laboratories. *State Pharmacy Councils* have been constituted in several States. The *Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954*, which came into force on the 1st April, 1955, prohibits the publication of advertisement relating to sexual stimulants, alleged magic cures for venereal diseases and diseases peculiar to women.

LABORATORIES AND DEPOTS

B. C. G. Vaccine Laboratory, Guindy, Madras—was established in 1948 by the Central Government with the help of UNICEF and WHO and is the world's largest vaccine-producing centre. This Laboratory supplies tuberculin and B.C.G. vaccines.

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Central Research Institute, Kasauli—was established in 1905 and supplies vaccines of TAB, cholera, rabies, etc.

Haffkine Institute, Bombay—manufactures sulpha drugs. The main functions of the Institute are medical research, training of research workers, supply of vital biologicals and diagnostic aids to the medical profession. The Institute is run by the Government of Maharashtra and collaborates with such national and international organisations as the Indian Council of Medical Research, the W.H.O. and the Rockefeller Foundations.

Central Drugs Laboratory, Calcutta—is a statutory laboratory set up under the Drugs Act to analyse and test samples of drugs which may be sent to it by the Central Government and to carry out other functions as may be assigned to it by the Central and State Governments from time to time.

Central Food Laboratory, Calcutta—has been set up by the Central Government under the Prevention of Food Adulteration Act 37 of 1954 for analysis of food samples, investigations for the purpose of fixation of standards of any article of food, etc.

Medical Store Depots and Factories—continue to function at Madras, Bombay, Calcutta, Karnal and Hyderabad. The Depots supply complete hospital equipment and drugs of tested quality to various Government and non-Government hospitals, institutions, municipalities, etc. The combined profit and loss account of the working of the Medical Store Depots and Factories for the year 1963-64 showed a profit of Rs. 13,63,784.

INDIGENOUS SYSTEMS OF MEDICINE

The Government of India have decided to recognise only the modern system of medicine. But the well-settled policy of the Government is to give all possible help and encouragement to the indigenous and homoeopathic systems of medicine and incorporate contributions of approved value from them in the existing system of medicine. *The Central Council of Ayurvedic Research* has been set up in pursuance of one of the recommendations of K. N. Udupa Committee set up in 1959. *The Central Institute of Research in Indigenous Systems of Medicine* has been functioning since August 24, 1953 at Jamnagar with a hospital and an out-patient department. A new 'Siddha' unit was started in the year 1956-57. A post-graduate training centre in Jamnagar and another research centre at Banaras Hindu University on Ayurveda have been started. State Boards have been set up in almost all States for the regulation of practice in indigenous system of medicine.

In 1955, the Government of India approved a five-year Degree course in homoeopathy. There are over 30 institutions imparting training in homoeopathy, and some are recognised by the State Boards.

The Unani Advisory Committee has also been formed.

The Government of India have purchased land at Kothrud near Poona to establish a Central Herb Garden and Museum of drugs. This garden which is known as the Jawaharlal Nehru Ayurvedic Medicinal Plants Garden and Herbarium was inaugurated on November 14, 1964.

HEALTH PLANNING COMMITTEES

The various committees for the promotion of Health in India are mentioned below :

Medical Council of India—was reconstituted in 1960 under the Medical Council Act of 1956. The Council *inter alia* is responsible for the maintenance of the Indian Medical Register which contains the names of all medical practitioners who are enrolled on the State Medical Registers and who possess any recognised medical qualifications under the aforesaid Act.

Central Council of Health—was started on August 9, 1952 under Article 263 of the Constitution. It considers and recommends broad lines of policy in regard to matters concerning public health in all its aspects.

Indian Nursing Council—was inaugurated at Delhi on May 19, 1949. One of the main functions of the Council is to lay down minimum standards for the training of nurses. The Indian Nursing Council has been vested with the power to inspect training institutions and examinations. The main object of the Council is to establish a uniform standard of training for nurses, midwives and health visitors, etc.

Central Committee for Food Standard—The main functions of the Committee are to advise the Central and State Governments on matters arising out of the administration of the Prevention of Food Adulteration Act, 1954 and to carry on other functions enumerated in the Act.

Provincial Medical Councils—which began to function in 1942, are now functioning in all the States. The Provincial Councils keep registers of qualified practitioners, supervise medical education and inspect examinations, exercise disciplinary powers over medical practitioners, and also advise the State Governments in regard to recognition of various medical qualifications.

The Pharmacy Council of India is a statutory body constituted under Sec. 3 of the Pharmacy Act of 1948. Its functions are to regulate the profession and practice of pharmacy, complete enforcement of the Pharmacy Act, the furtherance of training in pharmacy and educating the public about the profession. Till the end of 1964 the Council recognised the Degree/Diploma course in pharmacy conducted by 13 institutions.

Dental Council of India—With the passing of Indian Dentists Act of 1948, the Council was inaugurated on May 14, 1949 for the development of dental training and practice of the profession through the establishment of the Dental Councils at the Centre and in the States.

All-India Council of Post-Graduate Medical Education—has been constituted to prescribe standards for post-graduate medical education in the universities and offer suggestions to evolve uniformity of standards throughout the country.

National Nutrition Advisory Committee—was set up in 1960 in pursuance of the recommendation of Rome Conference of F.A.O. in 1957. It formulated that the member Governments should take due account of the national need of the population in settling and implementing policies and plans relating to food production and consumption including international trade in food.

The Central Medico-Legal Advisory Committee—was set up in 1955 to advise the Central and State Governments on matters pertaining to medico-legal procedure and practice in India and to promote the development of new and modern techniques in the field of medico-legal work.

FOOD ADULTERATION— *The Prevention of Food Adulteration Act, 1954* and its Rules are in operation throughout the country. It provides for severe punishment to offenders and prohibits the manufacture, imports or sales of adulterated food articles. The *Central Committee for Food Standards* and the *Central Food Laboratory* have been established in Calcutta.

CONTROL OF DISEASES

National Malaria Eradication Programme—The Government of India launched a National Malaria Control Programme in 1953, which was converted into National Malaria Eradication Programme in April, 1958. Malaria eradication programme is a phased campaign consisting of an intensive period of spray operations for at least 3 to 5 years. The programme is being assisted by the WHO and USAID. The *National Institute of Communicable Diseases* is responsible for research and for the training of staff in methods of malaria eradication. 6 regional coordinating organisations have been established at Bangalore, Baroda, Bhubaneswar, Hyderabad, Lucknow and Shillong. Under this Programme, at present 393.25 units each covering a population on an average of 1.2 million are functioning all over the country, including one unit allotted to Bhutan, and 1.25 units allotted to Srinagar.

National Filaria Control Programme—launched in 1955, comprises mass administration of drugs to people in filarious communities and adoption of anti-mosquito measures. The total population surveyed so far since the inception of the programme is 28.06 million. As a result of the surveys, it is estimated that over 122 million persons live in filarious areas of the country. 63.4 control units are functioning. A centre for practical demonstration and field training is functioning at Kozhikode and a new training centre has been started at Rajahmundry.

Veneral Diseases—It has been estimated that about 5 p.c. of the population suffer from syphilis and an equal p.c. from gonorrhoea. Free supply of VDRL antigen and 50,000 vials of PAM were made to various V. D. clinics. PAM is an imported item. The number of V. D. clinics on October 31, 1963 stood at 223. A Central V. D. Advisory Committee was also constituted during 1963-64.

Yaws—Yaws teams are continuing their operation in the States of Madhya Pradesh, Andhra Pradesh, Orissa and Maharashtra.

National Tuberculosis Control Programme—National T.B. survey completed in 1958, showed that nearly 50 lakh persons suffer from active or probably active T.B. There are 414 tuberculosis clinics in the country.

182 BCG teams are carrying on the mass BCG Vaccination Programme which was initiated in 1949. 125.23 lakh persons have been tuberculin tested and 61.67 lakh B.C.G. vaccinated during the period from 1-11-63 to 31-10-64. The WHO and UNICEF continue assistance in the form of BCG kits, vehicles, etc. *The T. B. Association of India* is the largest voluntary organisation in the country. Since its establishment in 1939, it has been engaged in anti-T.B. work. T. B. Hospital, Mehrauli Road, New Delhi is administered by the Association.

The research on T.B. is being undertaken at the T.B. Chemotherapy Centre, Madras and T.B. Research Unit, Madanapalli. 13 demonstration

and training centres have been established. Training is also imparted in other institutions and centres. A *National T. B. Institute* has been started since March, 1959 at Bangalore with the assistance of WHO and UNICEF. At the end of 1964, there were 140 sanatoria and hospitals, 414 clinics, 152 wards and over 27,000 beds available for T.B. patients.

Leprosy—The Leprosy Control Programme was launched in 1954-55. The number of leprosy cases in India is now estimated at about 25 lakhs. Andhra Pradesh, Bihar, Kerala, Madhya Pradesh, Madras and certain parts of Maharashtra, Uttar Pradesh and West Bengal are areas of high incidence. During 1964-65, 166 Leprosy Control Units, 487 Survey, Education and Treatment Centres, 10 Training Centres and 32 Voluntary Agencies were functioning. Some of the important centres of leprosy treatment are : (1) Gandhi Memorial Leprosy Foundation Centre, Chilakala Palli (Andhra Pradesh), (2) Central Leprosy Teaching and Research Institute, Chingleput (Madras), (3) Lady Willingdon Leprosy Sanatorium, Chingleput, (4) Silver Jubilee Children's Clinic, Saidapet (Madras). Voluntary organisations are : Mission to Lepers, Hind Kusht Nivaran Sangh, Maharogi Seva Mandal, Gandhi Memorial Leprosy Foundation, Ramakrishna Mission and Vidarbha Maharogi Seva Mandal.

Trachoma—The Trachoma Control Pilot Project was established in Aligarh on 1st December, 1959 for the preparation of topographical map of trachoma in India. The National Trachoma Control Programme was launched by the Government of India with effect from March 30, 1963. By the end of 1963-64, there were 50 field teams in operation all over the country.

Influenza—An influenza centre was opened in 1950 at the Pasteur Institute, Connoor. A pilot plant set up there in 1954, produces influenza vaccine and seeks to improve the method of its manufacture.

Cancer—The Government is utilizing all cancer research institutes of the country for treatment and research on cancer. Cancer research and treatment are being carried on by the Indian Cancer Research Centre, Bombay, Chittaranjan National Cancer Research Centre, Calcutta, Tata Memorial Hospital, Bombay and Cancer Institute, Madras.

Cobalt Beam Therapy Units are available in 16 hospitals in the country.

The *National Small-pox Eradication Programme* was launched in 1962. Under this Programme, 154 eradication units are working in the country and upto November, 1964 nearly 290 million vaccinations, 33.75 million primary and 256.25 million re-vaccinations, were performed. So far 157 districts are covered, from where eradication units have moved out and in 156 districts work is still in progress.

MEDICAL RESEARCH

Medical research in the country is organised largely through the *Indian Council of Medical Research*, founded in 1912 in New Delhi. The council plays a significant role on aiding, promoting and co-ordinating scientific research on human diseases, their causation, prevention and cure. The research works are done through the Council's several permanent research institutes, research units, field surveys, research service units and a large number of *ad-hoc* research enquiries financed by the

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Council in Medical Colleges, research institutions, University Science Departments, etc. It maintains Cancer Research Centres, Tuberculosis Chemotherapy Centre at Madras, Virus Research Centre at Poona, Nutrition Research Laboratories at Hyderabad and Blood Group Reference Centre at Bombay.

Cholera Cycle in 1967-68—A study by the Directorate-General of Health Services, at the instance of the Union Health Ministry has shown that the next cholera epidemic is likely to occur in India in 1967-68. The last was in 1963.

The number of deaths during the three epidemics (1953, 1957-58 and 1963) was 1,41,000. Taking the average, the Central Directorate has estimated that the next epidemic is likely to be responsible for 47,000 deaths.

Caloric intake—of food per adult in Punjab, Himachal Pradesh, Madhya Pradesh and West Bengal is about 3,000, while in other States it ranges from 2,000 to 2,050, Kerala having the lowest with only 1800 calories.

The consumption of pulses is highest in U.P. followed by Madhya Pradesh, Gujarat, West Bengal and Bihar—between 60 to 100 grammes per adult per day. In Kerala, it is very much lower.

In Andhra Pradesh, Gujarat and U.P., people consume about 16 grammes of millet on an average, while in Madhya Pradesh the average is only 20 grammes. In Kerala, West Bengal and Himachal Pradesh, consumption of millet is virtually nil.

In the case of sugar and jaggery (unrefined sugar), again Punjab is ahead with 85 grammes per day per adult. West Bengal and Maharashtra come next with 40 grammes each, while Bihar, Kerala and Himachal Pradesh bring up the rear with least consumption.

MEDICAL EDUCATION AND TRAINING

Medical education in general is the responsibility of the States. The Government of India's interest is limited to the promotion of higher studies and specific schemes of research and specialised training.

There are at present 84 medical colleges, 13 dental colleges (with an admission capacity of 464) and 11 institutions for training in the allopathic system of medicines. The total number of admissions in medical colleges is 10,277 in 1964-65.

Central Health Education Bureau—established in November, 1956, co-ordinates and promotes health education in the country. It functions through two main Media and Methods Divisions. The Media Division is completed with the exception of Museum and Exhibition units. Under the Methods Division, the training and research units are functioning. There is a separate unit for school health education. It also produces a monthly bulletin and quarterly magazine and maintains a film library.

All-India Institute of Medical Sciences, New Delhi—was set up in 1956 under an Act of Parliament and enjoys the status of an institution of national importance. It was set up with a view to (i) attaining self-sufficiency in post-graduate medical education, (ii) developing patterns of reaching to demonstrate a high standard of medical education and (iii) bringing together in one place educational facilities of the highest order. The total

estimated outlay on the Institute is Rs. 468.43 lakhs non-recurring and Rs. 107.61 lakhs recurring. The Institute has an Under-graduate Medical College with 50 annual admissions. There are 173 post-graduate students on the roll in various specialities. The Institute has a library. The Institute has received a grant of \$480,000 from the Ford Foundation.

Training and Research in Medical Statistics—This scheme provides for training in "Medical Statistics" at the All India Institute of Hygiene and Public Health, Calcutta and in "Medical Records Keeping" at the Christian Medical College and Hospital, Vellore.

Model Vital and Health Statistics Unit, Nagpur—started functioning in 1957. So far 184 candidates have been trained.

Foreign Scholars and Fellows in India—India is providing facilities for higher training in medicine, public health and allied subjects to the students from foreign countries, mostly from Africa and Asia.

Post-graduate Medical (including Dental) Education in Medical Institutions—This scheme envisages allotment of 23 new departments for treating post-graduate medical (including dental) students in various medical colleges in the country. The selected candidates are awarded a monthly stipend of Rs. 200.

Post-Graduate Centres—There is an institute of Post-graduate Medical Education and Research at Chandigarh and another one at Calcutta set up by the respective State Governments. The Jawaharlal Institute of Post-graduate Medical Education and Research at Pondicherry was started on July 13, 1964.

Post-graduate Medical Education—Delhi Scheme—Post-graduate courses in medicine, surgery, gynaecology, paediatrics, etc. 12 courses are being conducted in Delhi hospitals, etc. The stipend for these courses are Rs. 200 per month.

Admission of Students belonging to the Union Territories to Medical Colleges—Arrangements are being continued for the admission of students belonging to Union Territories which do not have medical colleges and students belonging to other categories to medical colleges.

Admission to Medical Colleges under the Government of India Central Scholarship Scheme—Students of Indian origin domiciled abroad and foreign students are admitted to various medical colleges in the country for which seats have been reserved.

Refresher Courses for General Medical Practitioners—This scheme has been included as a Central Scheme in the Third Plan.

Child Guidance Clinic of the College of Nursing, New Delhi—was established by the Ministry of Health in 1955 with the four-fold objectives of (a) service, (b) training, (c) parental education, and (d) research. It provides field work in Applied Psychology to the students in Nursing course and from the school of social work, Central Institute of Education and Lady Reading Health School and doctors. The clinic provides free service.

Lady Hardinge Medical College & Hospital, New Delhi—It is a leading medical college for women in the country. A grant-in-aid of Rs. 35.90 lakhs was paid to the institution upto December 10, 1964.

Kalavati Saran Children's Hospital, New Delhi—is a constituent unit of the Lady Hardinge Medical College & Hospital, New Delhi with 68 beds, for medical cases, with a department of Physical Medicine and

Rehabilitation for treating cases of paralysis and rehabilitating them. The institution imparts paediatric teaching to the undergraduate medical students of the Lady Hardinge Medical College and to the student nurses of the same College and Hospital, to the Public Health Nursing students of the Lady Reading Health School, and to the students of the Midwifery Sister Tutors' course of the College of Nursing. A grant-in-aid of Rs. 4,08,000 was paid to the institution upto December 10, 1964.

Lady Reading Health School and Ramchand Lohia Infants Welfare Centre, Delhi—The School conducts Certificate course in Public Health Nursing of 10 months' duration and Integrated Health Visitors Course of 2½ years' duration.

Physiotherapy School and Training Centre at the K. E. M. Hospital, Bombay—A physiotherapy training and service centre at the K. E. M. Hospital, Bombay has been established by the Government of India under an agreement with the WHO in collaboration with the Government of Maharashtra and the Municipal Corporation of Bombay. The centre is equipped with one ultra-vibrator.

Maulana Azad Medical College, New Delhi—125 students were admitted in this College in 1964-66.

Dhanvantari Medical College, Pondicherry—This College had started functioning in 1956. It is affiliated to the University of Madras.

College of Nursing, New Delhi—was established in 1946 and is affiliated to the Delhi University. It prepares students for following courses—Master of Nursing, B.Sc. (Hons.) in Nursing, Ward Sisters' Course, Sister Tutors' Course, Midwifery Tutors' Course, and Nursing Administration. The total number of students was 183 in December, 1964.

Training of Nurses and Auxiliary Nurse-Midwives, Health Visitors and Dais—At the end of March, 1964, there were 260 Auxiliary Nurse-Midwives training centres and the number of students was 8,332 and there were about 29,000 Auxiliary Nurse-Midwives in the country. At the end of March 1964, there were 222 training schools for Nurses and the number of students under training was 15,084. The total number of training centres run by voluntary organisation with Central assistance by the end of March 1964, was 25. From the inception of the scheme in 1954-55 upto September 1964, about 3,921 Health Visitors have been trained. Central assistance to the State Governments at the rate of Rs. 250 per Dai trained for the six-month course designed to orient the indigenous "Dais" to modern techniques of asepsis. From the inception of the scheme during the Second Plan upto March 31, 1964, about 20,000 Dais have been trained.

MEDICAL RELIEF

The total number of institutions under the Central Government Health Scheme is now 61.

Medical Relief, Sanitation & Public Health in the Union Territories—The Central Government is directly concerned with the provision of medical relief in the Union Territories.

Health Insurance Scheme which provides *inter alia* medical benefits to industrial workers under Employees' State Insurance Act, 1948, now covers over 20.18 lakh workers in the country.

Contributory Health Service Scheme came into operation on 1st July

1954 and was confined first to Delhi & New Delhi only and serves Central Government employees. The Scheme has been extended to Bombay from November, 1963.

Safdarjang Hospital, New Delhi—was taken over by the Government of India on 1st March, 1954. The present bed strength of the Hospital is 1,062 and number of medical officers 250.

Willington Hospital and Nursing Home, New Delhi—was taken over by the Government of India on 1st June, 1954. The present bed strength of the Hospital is 336. There are 77 doctors in the Hospital. A course of regular General Nursing was started in this hospital from 1st May, 1963. The hospital has been recognised for Diploma in Anaesthesia and for the M.D. degree of the Delhi University.

Lala Ram Sarup T.B. Hospital, Mehozauli (Delhi)—is administered by the T.B. Association of India. It is being maintained largely with the grants of the Government of India.

Police Hospital, Delhi—This Hospital has 50 beds.

Poor House Hospital, Delhi—caters to the inmates of the Poor House who are detained there under the Beggers Act, 1959.

Irwin Hospital, New Delhi—The total bed strength of the Hospital is 1,068 and there are 198 medical officers. The Hospital has a training programme for the training of Laboratory Assistants, Radiographers, Student Nurses, and Post-Graduate students.

Govind Ballabh Pant Hospital, New Delhi—was commissioned on the 3rd June, 1964 and provides for indoor treatment facilities in Neurology, Neuro-surgery, Cardiology, Cardio-Vascular surgery, Psychiatry, Gastroenterology and Haematology. An Orientation Course in *Hospital Administration* was started on 1st July, 1964. This is first course of its kind in Asia.

Hospital for Mental Diseases, Ranchi—This is one of the famous mental hospitals of India under the Government of India. The bed strength is distributed among various States.

Countess of Dufferin's Fund—This Fund vests in the Central Government under the Countess of Dufferin's Fund Act, 1957. The Fund is utilised towards grant of scholarships to women students for medical and nursing education. The income derived from the assets of the Fund is estimated at about Rs. 60,000.

Union Mission Sanatorium, Madanapalli—The Central Government has been meeting 50 p.c. of the recurring expenditure of this Sanatorium. A Children's Ward and Thoracic Surgical Unit were established with the assistance of the Government of India.

Integration of Public Health with the basic course in Nursing—Under this scheme, nurses' training schools of the State Governments and voluntary organisations are getting Central assistance.

Primary Health Centres—constitute the focal points in the rural areas for providing preventive and curative health services in an integrated form. The main services provided by the Centres are medical care, maternal and child health services including school health; health education; control of communicable diseases; environmental sanitation advice and assistance, improvement in the collection of vital statistics and family planning. The target for the establishment of these Centres in the Third Five-Year Plan and the achievement so far is as follows :—

States/Territories	No. of P.H.Cs required by the end of the Third Five- Year Plan at the rate of one P.H.C. for each Block	No. of P.H.Cs established during the First, Second & Third Five- Year Plan periods upto 31-3-64	No. of P.H.Cs functioning on 31-12-64
Andhra Pradesh	... 445	296	302
Assam	... 160	77	77
Bihar	... 575	493	582
Gujarat	... 224	181	225
Jammu & Kashmir	... 52	41	47
Kerala	... 142	123	142
Madhya Pradesh	... 416	355	371
Madras	... 375	137	144
Maharashtra	... 425	380	414
Mysore	... 268	223	239
Nagaland	... 16	Nil	—
Orissa	... 307	174	178
Punjab	... 228	213	218
Rajasthan	... 232	178	187
Uttar Pradesh	... 899	614	690
West Bengal	... 341	190	193
A. & N. Islands	... 5	—	Nil
Delhi	... 5	8	8
Himachal Pradesh	... 37	39	40
Manipur	... 16	10	10
N.E.F.A.	... 37	96	96
Pondicherry	... 3½	6	8
Goa, Daman & Diu	...	Nil	—
Laccadives, Minoccy & Amindivi Islands	... —	6	7
Tripura	... 15	15	16
Total	... 5,223½	4,034	4,373

Financial assistance to voluntary medical institutions are given.
Assistance to Indian Red Cross Society—A grant of Rs. 1,50,000 was paid to the Society in 1964-65.

Assistance to St. John Ambulance Association (India)—A grant of Rs. 50,000 was paid to the Association in 1964-65.

National Cleanliness Day and Children's Day Celebrations were inaugurated on the 2nd October, 1960 and 14th November, 1960 respectively. Anti-leprosy Day is observed on Mahatma Gandhi's martyrdom day, the 30th January.

Hospitals and Dispensaries— The number of hospitals and dispensaries in the country was 14,000 in 1962-63 and the number of hospital beds was 2,38,000 in December, 1963.

Nurses— The present estimated number of nurses is 39,000.

WATER SUPPLY AND SANITATION— The National Water Supply and Sanitation Programme launched in 1954, has been completed. Most of the 369 urban water supply schemes, 100 urban drainage schemes and 344 rural water supply and sanitation schemes, estimated to cost Rs. 102.17 crores, have been completed and the rest will be finished during the Third Plan period. A Drinking Water Board was set up in April, 1963.

INDIA AND THE INTERNATIONAL ASSISTANCE— India is a member of the World Health Organisation since 1948. India has been receiving striking assistance from the *World Health Organisation* and *U. N. International Children's Emergency Fund*. India has received assistance from WHO for the Malaria Control Programme, and the B.C.G. Campaign now extends to every part of India. The D.D.T. & Anti-biotic Production Plants have been established with WHO & UNICEF help. Assistance has also been received for fighting yaws and filaria, for starting or strengthening various departments at training institutions like the College of Nursing, New Delhi and similar institutions in Madras, Bombay and Calcutta, the Medical Colleges at Bombay and Trivandrum and the School of Tropical Medicine, Calcutta. WHO Fellowships have enabled selected candidates to receive valuable training abroad in various subjects concerning medicine and public health.

UNICEF is a specialised agency of the U.N., offering assistance in health programme for expectant and nursing mothers and children. The assistance is normally given in the form of equipment and supplies.

Rockefeller Foundation also provides fellowships, travel awards and grants-in-aid to various medical colleges and research institutes in India.

The Government of India continues to be the member of the *International Hospital Federation* which facilitates the exchange of ideas regarding the organisation of and improvement in hospital administration.

INSTITUTES & TRAINING CENTRES

All-India Institute of Hygiene and Public Health, Calcutta— was established in 1932 with the aid of an endowment from Rockefeller Foundation. The objects of the Institute are—(1) the training of public health personnel, (2) qualifying students for public health diploma and (3) pursuits of research on several aspects of public health, including study of diseases like malaria, etc. The Institute functions as a Yellow Fever Vaccine Centre for the distribution of vaccine to different centres.

Rural Health Unit & Training Centre, Singur (West Bengal)— The Centre functions as the rural practice field for students of the All-India Institute of Hygiene & Public Health.

National Institute of Health Administration and Education— was registered on the 24th September, 1964. A grant of \$1,246,000 has been made by the Ford Foundation to the Central Government for providing initial support to this Institute and the Central Family Planning Institute over a 5-year period. Out of this grant, a sum of \$683,000 is to be used for this Institute.

Central Family Planning Institute, New Delhi— was established in 1962 mainly for the advancement of knowledge in various aspects of the Family Planning movement in India. In order to facilitate expedi-

tious achievement of its objects the Government of India registered this Institute on 20th November, 1964. The Institute has six divisions, such as Administrative, Education, Training and Social Services, etc.

Urban Health Centre, Chetla, Calcutta— This Health Centre, apart from producing comprehensive health services, functions as a training centre for the students of various medical institutions in its activities.

Central Research Institute, Kasauli (1906)— provides facilities for research. Vaccines and sera manufactured by the Institute are cholera, T.A.B., Antirabic, Antibiotic (animal) and Antirabic (dog) vaccines, Antivenom Serum, Diphtheria Antitoxin. Normal Horse Serum, Tetanus Toxoid, Antirabic Serum and curative vaccines are also manufactured here. The Institute has following sections : (1) bacterial vaccine, (2) biochemistry, (3) biological, (4) serum concentration, (5) rabies and (6) antibiotic.

All-India Institute of Physical Medicine and Rehabilitation, Bombay— which was started as a joint venture of the Central and the Bombay Governments, Bombay Municipal Corporation and the UNICEF, was taken over by the Government of India on October 1, 1961. It imparts post-graduate instruction in rehabilitation of the disabled, in Physiotherapy, Occupational Therapy and other services, etc.

Central Leprosy Teaching and Research Institute, Chingleput— is now controlled by the Government of India. Activity of the Institute includes treatment of patients, welfare activities for the patients and training of personnel and research.

All-India Institute of Mental Health, Bangalore— This Institute was inaugurated on August 6, 1954. Besides promoting post-graduate studies and research in mental health, it advises the Government of India and the States on the organisation of mental health service and acts in co-ordination with national and international agencies on mental health. In 1955, the course for the Diploma in Psychological Medicine and the training course in Clinical Psychology have been started at the Institute.

Pasteur Institute of Southern India, Coonoor (1907)—It manufactures influenza vaccine on a pilot basis, carries on research on the value of antirabic serum and its production on a pilot basis and carries on studies in rabies, influenza, respiratory and intestinal viruses, syphilis, and small-pox. The special laboratories designed for the production of live polio virus vaccine were furnished and fitted up.

National T. B. Training Institute, Bangalore—was inaugurated in 1959. It has training course for B.C.G. workers.

Rural Health Training Centre, Najafgarh— performs a three-fold function : service, training and research.

National Institute of Communicable Diseases, Delhi— The Malari Institute of India was converted into this Institute on August 21, 1962. The official inauguration took place on July 30, 1963. The Institute is the main centre for research and training in the field of Communicable Diseases. It has five divisions and seventeen sections.

All-India Legopedic Institute, Mysore— will provide training to medical and para-medical workers in the field of speech therapy.

Vallabhbhai Patel Chest Institute, Delhi— has been established mainly for conducting research in diseases of the chest and in training doctors in that line. Successful candidates receive the Diploma in Tuberculosis and Chest Diseases (D.T.C.D.) from the Delhi University. A grant-in-aid of Rs. 6.85 lakhs has so far been released against a total budget provision of Rs. 10,20,000 for 1964-65.

Department of Serologist and Chemical Examiner to the Government of India, Calcutta— The Department carries on medicolegal analysis of blood and semen and other stains on exhibits seized in connection with the prosecution of criminals and manufactures ampoules of V.D.R.I. antigen and requisite quantity of buffered saline diluent.

PLAN PROVISION FOR HEALTH AND L.S.G.

Provision made for Health in the First, Second and Third Five-Year Plans and the expenditure incurred against each Plan are :

	Plan	Health Plan Outlay (Rs. in crores)	Percentage of total Plan (Public Sector)	Expenditure		
Health	First	140.00	5.8	101.00		
	Second	225.00	4.7	216.00		
				(61-62)	(62-63)	(63-64)
	Third	341.90	4.2	57.98	71.45	64.74

Provision made in Housing Sector for giving Central assistance to States for the preparation of Master Plans and for Urban Community Development and expenditure incurred are :

	Plan	Provision made (Rs. in lakhs)	Expenditure (Rs. in lakhs)		
L.S.G.	First	—	—		
	Second	—	—		
	Third	300.00	(1961-62)	(1962-63)	(1963-64)
Urban Community Development	First	—	—	28.18	22.80
	Second	—	—	NIL	
	Third	50.00	(1961-62)	(1962-63)	(1963-64)

Provision made in Health Plans for Family Planning and expenditure incurred against each Plan are :

	Plan	Provision made (Rs. in lakhs)	Expenditure (Rs. in lakhs)		
Family Planning	First	70.00		14.51	
	Second	300.00		215.58	
	Third	2,700.00	(1961-62)	(1962-63)	(1963-64)
			138.35	268.46	397.32

BIRTHS AND DEATHS IN INDIA

Years	Birth-rate per 1000	Death-rate per 1000	Expectation of Life Males	Females
1901-11	61.3	43.1	22.6	23.3
1911-21	49.2	48.6	19.4	20.9
1921-31	46.4	36.3	26.9	26.6
1931-41	45.2	31.2	32.1	31.4
1941-51	39.9	27.4	32.5	31.9
1951-61	40.0	18.0	45.0	45.0

FOOD & NUTRITION

(Calory requirements in India)

	Net Calories	Children	Net Calories
		Under 1 year	100
Men (120 lb.)		1 to 3 years	900
Light or Sedentary work	2,400	3 to 5 years	1200
Moderate hard work	3,000	5 to 7 years	1400
Very hard work	3,600	7 to 9 years	1700
Women (100 lb.)		9 to 12 years	2000
Moderate work	2,100		
Moderate hard work	2,500		
Very hard work	3,000		
Pregnancy	2,100	Adolescents	
Lactation	2,700	12 to 15 years	2400
		15 to 21 years	2400

(Nutrition Advisory Committee of Indian Research Fund Association)

MEDICAL COLLEGES

Andhra Pradesh

Andhra Medical College, Visakhapatnam.

Gandhi Medical College, Hyderabad

Guntur Medical College, Guntur.

Kurnool Medical College, Kurnool.

Osmania Medical College, Hyderabad.

Rangaraya Medical College, Kakinada.

Kakatiya Medical College, Warangal.

S. V. Medical College, Tirupati.

Assam

Assam Medical College, Dibrugarh.

Gauhati Medical College, Gauhati.

Medical College, Silchar.

Bihar

Prince of Wales Medical College, Patna.

Darbhanga Medical College, Laheriasarai.

Rajindara Medical College, Ranchi.

Medical College, Sakchi (Jamshedpur).

Gujarat

B. J. Medical College, Ahmedabad.

Medical College, Surat.

Medical College, Baroda.

M. P. Shah Medical College, Jamnagar.

Municipal Medical College, Ahmedabad.

Jammu & Kashmir

Medical College, Srinagar.

Kerala

Medical College, Trivandrum.

Medical College, Calicut.

Medical College, Kottayam.

Medical College, Alleppey.

Madhya Pradesh

Medical College, Jabalpur.
Mahatma Gandhi Memorial Medical College, Indore.
Gajra Raja Medical College, Gwalior.
Gandhi Medical College, Bhopal.
Medical College, Rewa.
Medical College, Raipur.

Madras

Madras Medical College, Madras.
Stanley Medical College, Madras.
Medical College, Chingleput.
Madurai Medical College, Madurai.
Christian Medical College, Vellore.
Thanjavur Medical College, Thanjavur.
Kilpauk Medical College, Kilpauk.

Maharashtra

Grant Medical College, Bombay.
Seth G. S. Medical College, Bombay.
Topiwala National Medical College, Bombay.
B. J. Medical College, Poona.
Govt. Medical College, Aurangabad.
Medical College, Nagpur.
Armed Forces Medical College, Poona.
Medical College, Sion.
Medical College, Miraj.
Medical College, Sholapur.

Mysore

Kasturba Medical College, Manipal (Mangalore).
Medical College, Mysore.
Bangalore Medical, Bangalore.
Karnatak Medical College, Hubli.
Medical College, Bellary.
St. John's Medical College, Bangalore.
Medical College, Gulbarga.
Medical College, Belgaum.

Orissa

Sriram Chandra Bhanj Medical College, Cuttack.
Medical College, Burla (Sambalpur).
Medical College, Berhampur.

Punjab

Medical College, Amritsar.
Christian Medical College, Ludhiana.
Govt. Medical College, Patiala.
Medical College, Rohtak.

Rajasthan

Sawai Man Singh Medical College, Jaipur.
Bikaner Medical College, Bikaner.
Medical College, Udaipur.
Medical College, Ajmer.
Medical College, Jodhpur.

Uttar Pradesh

King George's Medical College, Lucknow.
Medical College, Agra.
G. S. V. M. Medical College, Kanpur.
College of Medical Sciences, Banaras Hindu University, Varanasi.
Motilal Nehru Medical College, Allahabad.
Medical College, Muslim University, Aligarh.

West Bengal

Medical College, Calcutta.
R. G. Kar Medical College, Calcutta.
Nilratan Sircar Medical College, Calcutta.
Calcutta National Medical Institute, Calcutta.
Bankura Sammilani Medical College, Bankura.

Delhi

Lady Hardinge Medical College for Women, New Delhi.

All India Institute of Medical Sciences, New Delhi.	Goa Medical College, Panjim.
Maulana Azad Medical College, New Delhi.	Pondicherry Medical College, Pondicherry.

DENTAL COLLEGES

Andhra Pradesh Dental Wing, Osmania Medical College, Hyderabad.	Maharashtra Nair Hospital Dental College, Bombay. Govt. Dental College & Hospital, Bombay.
Bihar Dental College, Patna.	Mysore Dental College, Bangalore.
Gujarat Govt. Dental College, Ahmedabad.	Punjab Punjab Govt. Dental College, Amritsar. Dental Wing, Govt. Medical College, Patiala.
Kerala Dental Wing, Medical College, Trivandrum.	Uttar Pradesh Dental College, Univ. of Lucknow, Lucknow.
Madhya Pradesh College of Dentistry, M. G. M. Medical College, Indore.	West Bengal Calcutta Dental College, Calcutta.
Madras Dental Wing, Medical College, Dental Wing, Madras Medical College, Madras.	

FAMILY PLANNING

ORGANISATIONAL SET-UP— The head of the entire Family Planning organisation is the *Central Family Planning Board* constituted in September, 1956. Demographic Advisory Committee, Committee on Scientific Aspect of Family Planning of the Indian Council of Medical Research and the Family Planning Communication Research Committee have been established. Family Planning Boards are functioning in all the States. District Committees have also been formed. Full-time Family Planning Officers have been appointed in most of the States.

There are at present 15,800 Family Planning Centres, of which 14,000 are in rural areas. In addition, there are 7,233 contraceptive distribution centres in other medical institutions.

EDUCATION AND TRAINING— 143 Honorary Family Planning Education Leaders have been appointed in all the States. The Government of India have established four training centres at Delhi, Bombay and

Ramanasaram (Mysore) and All-India Institute of Hygiene and Public Health, Calcutta. All the State Governments have established Regional Family Planning Training Centres with hundred per cent grant from the Union Government. Voluntary organisations have, with the assistance of the Government of India, established Family Planning Welfare Workers' Training Centres at Hyderabad, Delhi, Allahabad, Nagpur and Madras. The number of persons given training in full-term and short-term training courses upto October, 1964 is reported to be 6,098 and 40,290 respectively. Audio-visual sets have been sent to 16 Regional Family Planning Centres and 16 Central Family Planning Field Units functioning all over India. One set each has also been supplied to each of the five Family Welfare Training Centres sanctioned by the Government of India. A set of audio-visual equipment has also been provided upto District level to be purchased direct by the States.

Propaganda to encourage Family Planning is handled by Directorate of Advertising and Visual Publicity through folders, booklets, posters, flash cards, outdoor publicity and playet. Apart from these, Films Division has produced a number of films which are shown all over the country.

FELLOWSHIPS— The Government of India have sanctioned 10 fellowships each in (a) Demography, (b) Family Planning Communication Research and (c) Medical and Biological Research. The duration of the fellowship will be 2 years and the fellows will work in India.

Apart from this, the Ford Foundation and the Population Council Inc., U.S.A., and the Worcester Foundation are awarding fellowships to Indians in Family Planning Communication Research, Demography and Medical and Biological Research in the U.S.A.

RESEARCH

(a) **Demographic Research**— At present, there are 6 Demographic Research Centres, one each at Bombay, Delhi, Calcutta, Trivandrum, Dharwar and Poona. A number of studies are being conducted on various aspects of Family Planning and population problems. The Demographic Training and Research Centre is giving training in Demography with U.N. assistance to a number of Indians as well as foreign students. Ever since the inception of the Centre in 1957, 122 persons have been trained, out of whom 73 are from other countries of Asia and one from Africa. The Demographic Research Centre at the Institute of Economics and Politics, Poona, was established in 1964-65.

(b) **Family Planning Communication Research**— There are at present 8 Family Planning Communication Research Centres as per details below :—

1. *Demographic Training & Research Centre, Bombay.*
2. *Family Planning Institute, New Delhi.*
3. *Planning Research and Action Institute, Uttar Pradesh, Lucknow.*
4. *Indian Statistical Institute, Calcutta.*
5. *Pilot and Training Health Project, Gandhigram, Madurai, Madras.*
6. *Lady Hardinge Medical College, New Delhi.*
7. *New Delhi Family Planning Association, New Delhi.*
8. *Kero University, Trivandrum.*

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The Ford Foundation assistance is being received to run these projects. A number of attitude surveys and motivational studies are being carried out by these Centres.

(c) **Medical and Biological Research**— Medical and Biological studies on various aspects of Family Planning are being carried out at the various institutions and universities under the Indian Council of Medical Research. The main aim of the Biomedical Research is to develop oral contraceptives and various other techniques for the prevention of conception. Intra-uterine device is being tried. Institutes like the Central Drug Research Institute, Lucknow, and the Cancer Research Institute, Bombay are also conducting research on medical and biological aspect of Family Planning.

CENTRAL FAMILY PLANNING INSTITUTE, NEW DELHI—

The Central Family Planning Institute was established in 1962 mainly for the advancement of knowledge in various aspects of the Family Planning movement in India, that is, Educational, Social, Medical, Biological, Statistical, Demographical, Organisation and Supply. In order to facilitate expeditious achievement of its objects the Government of India have decided to register the Central Family Planning Institute as an autonomous body and the Institute was registered under the Societies Registration Act of 1860 with effect from the 20th November, 1964. The Institute at present has the following divisions :—

(1) *Administrative*; (2) *Education, Training and Social Sciences*; (3) *Medical and Biological Research*; (4) *Programme, Planning, Development and Evaluation*; (5) *Information and Audio-visual*; (6) *Demographic and Statistical*.

During 1964-65 Najafgarh study on contraceptives along with staff of the research unit has been transferred to the Institute.

The activities of the Central Family Planning Institute were continued during 1964-65. The Institute provided short-term training facilities to 337 medical, para-medical and voluntary workers for Family Planning during 1964. The Institute held orientation camps and small group meetings to educate masses in Family Planning.

METHODS OF FAMILY PLANNING— The chief methods of Family Planning can be grouped under the following heads : (a) *Mechanical*—namely, the use of rubber sheaths, cervical and pessaries. Licences for the manufacture of rubber contraceptives have been issued to 8 firms with licenced capacity of 361.97 million pieces. 4 additional firms in small-scale sectors have been given licences for the manufacture of 1.9 million pieces. (b) *Chemical*—use of spermicidal drugs and foam tablets by women; (c) *Hormonal*—use of hormones taken orally by women regularly; (d) *Surgical*—involving sterilization operations on both men and women and abortion of conceptions. High priority is given to the voluntary sterilization scheme. The number of sterilization operations reported from January, 1956 upto October, 1964 was 6,98,085 (including 4,49,258 males and 2,48,827 females). (e) *Biological*—including such measures as prohibition of marriage up to a certain age, so that girls at the most fertile period of their lives have no chance of becoming pregnant.

A new method to check the increase of population has been started since 1965. It is known as *Loop*—the word stands for Lippes Loop which despite the name, is not a loop or ring, but a coil. It is made of polythene, a plastic and looks like two letters S joined together. A factory for making it has been set up in U.P.

Of all these methods, the most effective is, however, the use of rubber contraceptives by men and oral contraceptives by women. Sterilization is also effective. Contraceptive pills for men are also being tested. An effective method of reducing birth rate is by legalising abortion. This has been proved in Japan where the birth rate has dropped to half. It is also obvious that if the age of marriage of girls was increased to 20, the birth rate would automatically come down appreciably.

NATIONAL DEFENCE

DEFENCE ORGANISATION— is under the charge of Ministry of Defence. The three services of Army, Navy and Air are placed under the separate and independent executive heads who are called Chief of the Army Staff, Chief of the Naval Staff and the Chief of the Air Staff respectively. The Supreme Command of the Armed Forces in India is vested in the President of India.

The Ministry of Defence is the Central agency for formulating and obtaining policy decisions of the Government of India and for transmitting them to the Defence Services Headquarters for implementation. The Ministry also obtains the Central finance for defence expenditure and allocation among the defence services.

The Defence Minister is assisted by a Minister of State for Defence Production and a Deputy Minister.

INTER-SERVICE ORGANISATIONS— The following are the inter-service organisations under the Ministry—(1) Production and Inspection Organisation, (2) Research and Development Organisation, (3) Armed Forces Medical Services, (4) National Cadet Corps, (5) Resettlement, (6) National Defence College, (7) Border Roads Development Board, (8) Directorate of Public Relations etc.

The President has appointed a Parliamentary Committee, known as Consultative Committee, from amongst its members to keep itself informed of all developments.

After the Emergency, a National Defence Council, with the Prime Minister as Chairman, has been formed to advise the Government.

ARMY TRAINING INSTITUTIONS

Indian Military Academy, Dehra Dun—is India's premier training institution for the training of Army officers. The bulk of the Cadets come from National Defence Academy at Khadakvasla, Poona. There are also Cadets of higher age-groups chosen directly and known as 'Direct Entry Cadets.'

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Army Cadet College, Poona—The object of this College is to impart training to Army and other ranks prior to their appearing before the Services Selection Board for admission in the Indian Army Military Academy.

Services Corps Schools—train officers, J.C.O.s and N.C.O.s of the Service Corps in their corps duties.

Army Ordnance School—imparts specialised corps training to all officers, J.C.O.s and other ranks in the identification, handling storage, care custody, etc. stocked by ordnance.

E. & M. Engineering School—This school imparts technical training to officers, J.C.O.s and other ranks in the maintenance, necessary repair, inspection, etc.

Army Education Corps Training College and Centre, Panchmarhi—has been recognised to make students more useful to soldiers during their active services as well as later in civil life.

Remounts, Veterinary & Farms Corps Centre and School—is responsible for training equitation instructors for the Army and giving them training in horsemanship and stable management.

Intelligence Training School—was formed in 1948. Officers for grade-III intelligence staff appointed at Formation Headquarters and for other intelligence appointments are given training here.

School of Physical Training—conducts efficiency of physical training carried out at the schools and in units of all corps on the lines laid down by Army Headquarters.

Armoured Corps Centre and School, Ahmednagar—undertakes the training of regimental instructors, squadron commanders, etc.

College of Military Engineering, Kirkee—imparts training to officers and other ranks in all aspects of military engineering.

Schools of Signals, Jabalpur and Mhow—impart basic and advanced technical training in telecommunication and signal tactics.

School of Artillery, Deolali—provides training in field, anti-tank and anti-aircraft artillery.

Infantry School, Mhow—conducts courses in the tactical and administrative handling of units and submits for senior officers.

There are also *Armed Forces Medical College, Army Educational Centre and School, Army Air Transport Support School, School for Mechanical Transport, Corps of Military Police Centre and School and the School of Music.*

Other Army Training Centres and Schools—Service Corps School, Bareilly; Remounts & Veterinary Centre and School, Meerut; School of Physical Training, Poona; Army and Air Transport Support School, Agra; School of Mechanical Transport, Faizabad; Corps of Military Police Centre and School, Faizabad; Education Centre and School, Panchmarhi; Military School of Music, Panchmarhi; Electrical and Mechanical Engineering School, Trimulgerry.

NAVAL TRAINING

Training of all officers and men of the Navy is undertaken at the main *Naval Training Centres* at *Cochin, Bombay, and Visakhapatnam.*

Principal training centres of the Navy are *INS Vedarvathy* and the

naval air station *Garuda*, both situated at *Cochin*. At *INS Shivaji* situated at *Lonavlia* (*Maharashtra*), engine room branch sailors and artificers are trained. A new engineering school has been started here to train junior engineers and electrical officers of the service. *INS Valsura*, the Electrical School of the Navy at *Jamnagar*, trains officers and men of the Electrical Branch of the service. New boy recruits coming into the Navy, are trained at *INS Circars* at *Visakhapatnam* and on completion of the course, become sailors. Officers and men of the Supply and Secretariat Branch are trained at *INS Humla* at *Bombay*.

AIR TRAINING

The basic flying of a year's duration for pupil pilots is given at the *Air Force Flying College*, *Jodhpur* and at the *Pilot Training Establishment*, *Allahabad*. At the *Jet Training and Transport Training Wing* of the *Air Force Station*, *Hyderabad*, advanced flying and conversion training is given for a year. The *Air Force Administrative College* at *Coimbatore* trains officers in various ground duties. Medical Officers are trained at the *School of Aviation Medicine* at *Bangalore*. *Air Force Training College* at *Jalahalli* trains officers in engineering signals, etc. A *School* at *Jalahalli* trains airmen in accounting equipment, general office duties, medical assistance. Another *School* at *Jalahalli* trains airmen in higher signal trades. Flying instructors are trained in a separate *School* at *Tambaram*. Another school, located at *Tambaram*, trains airmen in technical trades. A school for higher staff studies in combined land-air warfare has been instituted at *Hyderabad*. There is a *Paratroopers' School* at *Agra*.

MILITARY TRAINING FOR THE PEOPLE—In order to build up a reserve force to be called into service in a national emergency, a *Territorial Army*, a *National Cadet Corps* and an *Auxiliary Cadet Corps* have been formed.

Territorial Army—The *Territorial Army* is an auxiliary force to the regular Army and is the second line of defence. This force consists of citizens who follow their normal vocations and receive military training in their spare time, and undergo active military service when embodied.

When *Territorial Army* units are embodied, the personnel of the units are assigned duties as in the regular Army. Before the commencement of the emergency, 16 units had been embodied. 84 additional units were embodied thereafter out of a total number of 140. 33 units are at present embodied. During the year, the *Territorial Army* recruitment zones were reorganized and the whole country was divided into 4 zones instead of 5 which were previously in existence.

Territorial Army Officers have been made eligible for promotion to the acting rank of Brigadier, against a specific vacancy, on completion of 20 years of service. Civil Government servants embodied for service in the *Territorial Army* are allowed to retain their civil family accommodation for 2 months from the date of their joining military duty if they are posted to a non-concessional area, or until their transfer to a peace station if they are required to serve in a concessional area.

It has been agreed by the Director of Employment Exchanges, Ministry of Labour, that *Territorial Army* personnel embodied for service

during the present emergency, would be treated as 'Discharged Government Employees' and accorded 'Priority III' by Employment Exchanges for the purpose of civil employment provided they were employed on a whole-time basis against regular establishment for a period of 6 months or more.

The role, concept and strength of the Territorial Army are kept under constant review on the basis of the experience gained during the past 15 years, to make it a more effective force.

National Cadet Corps— On April 8, 1948, Parliament passed the National Cadet Corps Act with the object of (a) developing character, comradeship, the ideal of service and capacity for leadership in the youth, (b) giving the youth basic military training and training in the weapons and equipment of the three Services and thus attracting suitable young men to join the country's Armed Forces, (c) stimulating interest in the defence of the country and (d) building up a reserve of leaders to expand the Armed Forces in a national emergency.

The N.C.C. is entirely voluntary, with no liability for service in the Armed Forces. With the declaration of emergency following the Chinese aggression it was decided by the University authorities to make N.C.C. compulsory for all able-bodied under-graduate men from 1963. The N.C.C. now covers more than 13 lakh boys and girls.

The N.C.C. consists of 2 divisions : the *Junior Division* which is for school boys between 13 and 18½ years, and the *Senior Division* which is for young men below 26 reading in colleges, universities and technical institutions of collegiate status. The *Girls Division* has a senior and junior wing. Each of the N.C.C.'s boys divisions is divided into 3 wings : Army Wing, Naval Wing and Air Wing.

INTER-SERVICE TRAINING INSTITUTIONS

National Defence College—Ordinarily, officers for the course of NDC are of the rank of Colonels or Brigadiers in the Army, equivalent ranks in the Navy and the Air Force and of Civil Services, viz. I.A.S., Indian Audit & Accounts Service, etc. This College is expected to equip these officers with necessary background knowledge and understanding of different military, economic, scientific, political and organisational aspects of the national policy.

National Defence Academy, Khadakvasla, Poona—Entrance to the Academy is through the Union Public Service Commission. Candidates qualifying at these tests have to appear for a final test and interview before the Services Selection Board. They have also to appear before the Medical Board. Age limitations are between 15 and 17½ years. As at present, on passing out from N.D.A., Cadets diverge for a further training for a year or two. Army Cadets go to Dehra Dun, Naval Cadets to *INS Tir*, cadet-training ship, and Air Cadets to Jodhpur.

School of Land/Air Force—is an inter-service establishment started in September, 1959 at Secunderabad. The object of the School is to provide instruction, advice and guidance in the three basic aspects of land/air warfare.

Defence Services Staff College, Nilgiri Hills, South India—The object of the course at this College is to turn out officers up to the standard required for second-grade appointments and in doing so, make them fit for further training for higher staff appointments.

School of Foreign Languages—was started in 1949, to provide facilities for learning foreign languages to service personnel and civilian employees of the Government of India.

Rashtriya Indian Military College, Dehra Dun—brings up future officers of the three services by imparting preliminary pre-cadet training to such pupils as desire subsequently to choose a military career. It thus serves as a feeder to the National Defence Academy.

Armed Forces Medical College, Poona—Besides imparting training to newly-commissioned medical officers, it runs refresher courses for them to keep them up-to-date in their profession.

Himalayan Mountaineering Institute, Darjeeling—was established in 1954. The chief objects of the Institute are—(1) to awaken interest in and love for mountains and exploration of unknown area, (2) to impart practical and theoretical mountaineering techniques, etc.

Sainik Schools—have been established in a number of States. These Schools aim at preparing boys mentally and physically, not only for the entry into NDA but also to take responsible positions in other walks of life. The administration of the Schools vests in an autonomous Board of Governors under the chairmanship of Defence Minister.

King George's Schools—are run by the Defence Ministry and are 4 in number.

ARMY

Army HQ—The Head of the organisation is the *Chief of the Army Staff*. He is assisted by the *Vice-Chief of the Army Staff* and four other Principal Staff Officers (the *Deputy Chief of the Army Staff*, the *Adjutant General*, the *Quartermaster-General*, the *Master-General of the Ordnance*) and two Heads of Branches (the *Military Secretary* and the *Engineer-in-Chief*, each of the rank of Major-General). The functions of the Branches are indicated below :—

(i) The *General Staff Branch*—(a) organisation and employment of the Army, military operations, intelligence, training combat-development, military survey including maintenance and supply of maps and plans and engineer staff matters which are dealt with by VCOAS and (b) staff duties, selection and scale of weapons and equipment, co-ordination of policy regarding equipment including provisioning, Armoured Corps, Artillery, Signals, Infantry, Territorial Army and Defence Security Corps which are dealt with by DCOAS.

(ii) The *Adjutant General's Branch* deals with manpower, recruitment, leave, pay and allowances and pensions and other conditions of services, and discipline. It also deals with welfare and health of personnel and military law.

(iii) The *Quartermaster-General's Branch* deals with movement of personnel, stores, and equipment; provision, storage, inspection and issue of fuel, foodstuffs and forage; military farms, remount and veterinary

services, Army postal, pioneer and canteen services, works policy ; fire-fighting services and technical examination of MES works bills.

(iv) The *Master-General of the Ordnance Branch* deals with all aspects of procurement policy, provision, storage, recovery, repair, maintenance and issue of all stores and equipment of Ordnance Supply including M.T. vehicles, weapons and ammunition, signal equipment, general stores and clothing as well as supply of common-user items to the Navy and the Air Force.

(v) The *Military Secretary's Branch* deals with the issue of commissions in the Army, postings, transfers, promotions, releases, retirement, resignation, invalidment and transfer to the Reserve of all non-medical officers of the Army ; maintenance of confidential reports and personal records of all non-medical officers of the Army ; providing the secretariat for Selection Boards which recommend officers for promotion to the rank of Lt.-Colonel and above ; recommendations for the grant of honours and awards to Army Officers and Honorary Commissions in the Army to civilians.

(vi) The *Engineer-in-Chief's Branch* deals with all matters relating to Engineering units and Engineer stores ; administration of personnel of the Corps of Engineers and the MES ; design, construction and maintenance of all accommodation and works for the Defence Services.

A few years back, a new organisation, *Border Roads Development Board* has been created under a Brigadier of Engineering Service. It works for discipline and planning under the Chief of General Staff but for technical advice under the Engineer-in-Chief.

Composition of the Indian Army (Arms and Services)—(1) armoured corps, (2) artillery, (3) corps of engineers, (4) corps of signals, (5) infantry, (6) army service corps, (7) ordnance corps, (8) corps of electrical and mechanical engineers, (9) army medical corps, (10) army dental corps, (11) army education corps, (12) remounts, veterinary and farms corps, (13) military police defence security corps.

Voluntary Defence Organisations—(1) Territorial Army and (2) National Cadet Corps.

Four Commands—The Indian Army is now organised into 4 Commands—*Eastern, Central, Western and Southern*—each under a General Officer Commanding-in-Chief of the rank of Lt.-General. The Commands are divided into *Areas*, each under a General Officer Commanding of the rank of Major-General. The Areas, in turn, are subdivided into *Sub-Areas*, each under the command of a Brigadier. The Sub-Areas are further divided into *Stations* commanded by the senior officers posted there.

Army Ranks—The various commissioned ranks in the Army from the top to downwards are : *General, Lieutenant-General, Major-General, Brigadier, Colonel, Lt.-Colonel, Major, Captain, Lieutenant* and *Second Lieutenant*.

Below them are Junior Commissioned Officers and Non-Commissioned Officers of the following ranks in order—*Junior Commissioned Officers* : (1) Naik Subedar/Naik Risaldar, (2) Havildar or Subedar, (3) Risaldar Major/Subedar Major. *Non-Commissioned Officers* : (1) Lance-Subedar/

Lance-Naik, (2) Lance-Havildar, (3) Dafadar/Havildar, (4) Dafadar Major. Below them comes the ordinary sepoy, popularly known as *Jawan*.

The ranks in the Junior Commissioned or Non-Commissioned cadres are filled by seniority and merit among the sepoys who are recruited. An officer recruit is commissioned as *Second Lieutenant* after completing his training. Promotions are determined by seniority and merit.

There are similar ranks in the Navy and the Air Force though designations differ.

NAVY

The Naval Headquarters at Delhi control the administration and operation of all ships and establishments. The Executive Head of the organisation is the *Chief of the Naval Staff* who holds the rank of Admiral or Vice-Admiral.

Under him are various administrative authorities, both afloat and ashore, directly responsible to him for the day-to-day administration of the service.

The 4 Principal Staff Officers are : (1) *Deputy Chief of the Naval Staff*, (2) *Chief of Personnel*, (3) *Chief of Material*, (4) *Chief of Naval Aviation*.

Operational and Administrative Commands—The Chief of the Naval Staff exercises control over the Navy through the following forms of Operational and Administrative Commands—(1) *Flag Officer Commanding, Indian fleet*, with his headquarters on board the Flagship *INS Vikrant*, exercises control over the Indian naval fleet, (2) *Flag Officer, Bombay*, with his headquarters ashore at Bombay, (3) *Commodore-in-Charge, Cochin*, with his headquarters at Cochin, is the Administrative Authority of all shore establishments in the Cochin Command, (4) *Commodore, East Coast, Visakhapatnam*, with his headquarters ashore at Visakhapatnam.

Ranks of the I.N.—Commissioned Officers : *Admiral, Vice-Admiral, Rear Admiral, Commodore (1st Class and 2nd Class), Captain, Commander, Lt.-Commander, Lieutenant, and Sub-Lieutenant*.

Ships of the Indian Navy—(1) *INS Vikrant*, an aircraft-carrier, is the Flagship of the Flag Officer Commanding, Indian fleet, (2) *INS Mysore* is a colony class cruiser, formerly known as H.M.S. *Nigeria*, (3) *INS Delhi*—7,030 tons.

Destroyer Squadrons—(1) *INS Rajput, Ranjit, and Rana*; (2) *INS Godavari, Gomati and Ganga*—all Hunt class.

Frigates—*INS Cauvery, Kistna, Tir, Brahmaputra, Kukri, Beas, Betwa, Kirpan, Kuthar, Talwar, and Trisul*.

Mine-Sweeping Squadrons—One known as the 18th Mine-Sweeping Squadron comprising *INS Bassein, Bimlipatnam, Kakinada, Cannanore, and Cuddalore*.

Survey Ships—consist of *INS Investigator, Jumna, Sutlej, and Darshak*.

Other Ships—are *INS Hathhi* (Ocean-going Tug), *Shakti* (Fleet Tanker), and *Dharini* (Stores and Repair Ship).

AIR FORCE

On the recommendation of the *Skeen Committee* in 1926, a flight of the Indian Air Force was formed on April 1, 1933. Beginning its career

with a few Wapiti aircraft and a handful of Cranwell-trained pilots and a small team of airmen, the IAF has acquired a distinguished stature and status during the past 33 years. Today, the service is not only a distinct and indispensable arm of the country's Armed Forces, in keeping with the defence needs of the nation, but it is a modern, flying fleet expanding Air Force.

The principal head of the Indian Air Force is the *Chief of the Air Staff*. The Air Headquarters are located at Delhi which are responsible for the control of the organisation.

The Chief of the Air Staff holds the rank of Air Marshal and is assisted by 4 Principal Staff Officers of the rank of Air Vice-Marshal, controlling four main Branches of the Air Force. Each Branch is divided into Directorates.

The Branches of the Air Force Headquarters are :

- (1) *Air Staff Branch*—This Branch has the following Directorates : Directorate of Signals, Directorate of Training, Directorate of Intelligence, Directorate of Meteorology, Directorate of Auxiliary and Reserves.
- (2) *Administrative Branch*—has the following Directorates and Departments : Directorate of Organisation, Directorate of Personnel, Directorate of Medical Services, Directorate of Accounts, Directorate of Personal Services, Directorate of Air Force Works, Chief Engineer, Air Force Sports Control Board, and Judge Advocate-General.
- (3) *Maintenance Branch*.
- (4) *Policy and Plans Branch*.

Commands and Operation—A few units are controlled by the Air Headquarters. Otherwise all Force Units are controlled by 5 major formations called Commands—*Western Air Command*, *Training Command*, *Maintenance Command*, *Eastern Air Command* and *Central Air Command*.

Ranks of the I. A. F.—Commissioned Officers : *Air Marshal*, *Air Vice-Marshal*, *Air Commodore*, *Group Captain*, *Wing Commander*, *Squadron Leader*, *Flight Lt.*, *Flying Officer*, and *Pilot Officer*.

Other Ranks : *Master Warrant Officer*, *Warrant Officer*, *Flight Sergeant*, *Sergeant*, *Corporal*, *Leading Air-craftsman*, *Air-craftsman Class I*, and *Air-craftsman Class II*.

Aircraft Production—A public limited company, the *Aeronautics India Ltd.*, with an authorised capital of Rs. 25 crores to run a complex of factories for the manufacture of a modified MIG-21, was registered in August, 1963. The *Aircraft Manufacturing Depot*, Kanpur merged with this Company in June, 1964. The *Hindustan Aircraft Ltd.*, Bangalore came under its wings in October, 1964 when the Company was redesignated as the *Hindustan Aeronautics Ltd.* The entire aircraft manufacturing industry in the country has thus come under a unified control to ensure greater co-ordination and collaboration among the various units and help in streamlining production of aircraft in the country.

The *Hindustan Aircraft Ltd.*, Bangalore, which was set up in 1940, has since designed and manufactured a modern all-metal two-seater Basic Trainer HT-2. It also undertook manufacture of Vampire sub-sonic

fighter, and the Gnat constructed under licence. It designed and manufactured a low-cost ultra-light aircraft called 'Pushpak' and a multi-purpose aircraft, 'Krishak' designed to perform different roles, such as light passenger travel, air ambulance work, air observation duties and crop spraying.

The HAL has lately designed and manufactured a supersonic fighter-bomber, HF-24 and a Basic Jet Trainer, HJT-16, recently designed as 'Kiran'. It has also manufactured Dart-6 engines for Avro-748 and Orpheus-703 engines for HF-24 under licence agreements (See Index).

The Aircraft Manufacturing Depot, Kanpur has so far manufactured 4 Avro-748—a modern streamlined transport aircraft—under series I & II in collaboration with the Hawker Siddeley group. A number of Avros are on the assembly lines.

DEFENCE RESEARCH

The Defence Research and Development Organisation was created in its present form in January 1958 by amalgamating the Defence Science Organisation and the former Technical Development Establishments. It functions under the overall control of the Scientific Adviser to the Minister of Defence. The Organisation has built up over 30 establishments or laboratories to meet the requirement of the Armed Forces in various fields.

Currently, there are over 700 research projects and studies of various nature in hand in the development establishments and research laboratories of this Organisation.

DEFENCE PRODUCTION

The Department of Defence Production controls 6 public sector limited companies and 24 ordnance factories at present. The value of production of all the ordnance factories during the year 1963-64 was Rs. 111.34 crores.

The public-sector undertakings are the Hindustan Aeronautics Ltd., the Bharat Electronics Ltd., Bangalore; Garden Reach Workshops Ltd., Calcutta; the Mazagon Docks Ltd., Bombay; the Bharat Earth-Movers Ltd., Bangalore and the Praga Tools Ltd., Hyderabad (See Index).

DEFENCE EXPENDITURE

Year	Rs. (in crores)	p.c.
1961-62	290	32
1962-63	425	32
1963-64 (Revised estimate)	693	42
1964-65	718	38

HIGH DEFENCE OFFICERS

Army

Chief of the Army Staff—General J. N. Chaudhuri.
 Vice-Chief of the Army Staff—Lt.-Gen. P. P. Kumaramangalam.
 Deputy Chief of the Army Staff—Lt.-Gen. K. P. Candeth.
 G.O.C.-in-C., Western Command—Lt.-Gen. Harbakhsh Singh.
 G.O.C.-in-C., Eastern Command—Lt.-Gen. S.H.F.J. Manekshaw.

G.O.C.-in-C., Southern Command—Lt.-Gen. Moti Sagar.
 G.O.C.-in-C., Central Command—Lt.-Gen. K. Bahadur Singh.
 Adjutant-General, Army HQ—Lt.-Gen. M. S. Pathania.
 Quartermaster-General, Army HQ—Lt.-Gen. R. S. Paintal.
 Master-General of Ordnance, Army HQ—Lt.-Gen. A. C. Iyappa.

Navy

Chief of the Naval Staff—Vice-Admiral A. K. Chatterjee.
 Deputy Chief of the Naval Staff—Rear-Admiral S. N. Kohli.
 Flag Officer Commanding, Indian Fleet—Rear-Admiral B. A. Samson.
 Flag Officer, Bombay—Rear-Admiral R. S. David.
 Commodore-in-Charge, Cochin—Commodore G. S. Kapoor.
 Commodore, East Coast, Visakhapatnam—Commodore D. St. J. Cameron.
 Chief of Personnel, Naval H. Q.—Rear-Admiral K. N. Nair.
 Chief of Material, Naval H. Q.—Rear-Admiral P. S. Mahindroo.
 Chief of Naval Aviation, Naval H. Q.—Commodore G. Douglas, D.F.C.

Air Force

Chief of the Air Staff—Air Marshal Arjan Singh, D.F.C.
 Vice-Chief of the Air Staff—Air Vice-Marshal P. C. Lal, D.F.C.
 Deputy Chief of the Air Staff—Air Vice-Marshal M. M. Engineer, M.V.C., D.F.C.
 A.O.C.-in-C., Western Air Command—Air Vice-Marshal R. Rajaram, D.F.C.
 A.O.C.-in-C., Eastern Air Command—Air Vice-Marshal Y. V. Malse.
 A.O.C.-in-C., Central Air Command—Air Vice-Marshal Shivdev Singh.
 A.O.C.-in-C., Training Command—Air Vice-Marshal S. N. Goyal.
 A.O.C.-in-C., Maintenance Command—Air Vice-Marshal O. P. Mehra.
 Air Officer-in-Charge, Administration, Air H. Q.—Air Vice-Marshal M. S. Chaturvedi.
 Air Officer-in-Charge, Maintenance, Air H. Q.—Air Vice-Marshal H. N. Chatterjee.

LANGUAGES

Languages in the Indian Constitution—The Indian Constitution recognises 14 languages, namely, Assamese, Bengali, Gujarati, Hindi, Urdu, Kannada, Kashmiri, Malayalam, Marathi, Oriya, Punjabi, Sanskrit, Tamil and Telugu. Hindi has been declared the official language of the country, but for a period of fifteen years from January 26, 1950. English will also continue to be in official use.

Official Language—Article 343 of the Constitution provides that the official language of the Union shall be Hindi in the Devanagiri script and the form of numerals for official purposes shall be the international form of Indian numerals. English which was originally to continue as the official language upto January 26, 1965, will, under the Official Languages Act, 1963, continue to be used even after that in addition to Hindi.

From 26th January, 1965, Hindi has been accepted as the official language of the Union, i.e., the official correspondence with the Union and the Hindi-speaking States should be carried out in Hindi.

Anti-Hindi Agitation—From 27th January, 1965 anti-Hindi agitation in South India took a grim turn. On the same day two young men burnt themselves to death in Madras in protest against the introduction of Hindi as the only official language of the Union. On 10th February (violent anti-Hindi agitation went on during these days), two sub-inspectors were burnt to death by violent anti-Hindi agitators at Tirupur in Madras, while 17 people were killed in police firing. The next day, two members of the Union Council of Ministers from Madras—Mr. C. Subramaniam and Mr. O. V. Alagesan—resigned over the language issue. On the same day, the 11th February Prime Minister Lal Bahadur Shastri in a nationwide broadcast on the language issue declared that the assurances given by Mr. Nehru that English would continue to be used as an assistant official language for as long as the non-Hindi-speaking people wanted it would be “honoured both in letter and spirit without any qualification or reservation.” On the next day, the 12th February the anti-Hindi agitation in the South claimed 24 more lives. Then Madras became quiet. The total number of deaths in police firing up to 14th February was 66. On the 15th February, a curfew was clamped in Nellore, Andhra Pradesh after mob violence and the police firing claimed two more lives. On the 16th February, Mr. Subramaniam and Mr. Alagesan withdrew their resignation. On the 17th February, a categorical assurance that Mr. Nehru’s assurances on the language issue would be carried out “without qualification and reservation” was given to the members of Parliament by President Dr. Radhakrishnan in his address on the first day of the budget session and the anti-Hindi agitation was called off.

Origin and Growth of Indian Languages—The four great linguistic families of India are : (1) *Indo-Aryan*, (2) *Dravidian*, (3) *Austriac* and (4) *Sino-Tibetan Aryan*.

Indo-Aryan Languages are descended from the ancient speech of the Indo-European invaders who came to India from their original homeland in the Eurasian plains. The oldest form of Aryan speech is to be found in the Vedas believed to have been completed in the 10th century B.C. Vedic Sanskrit gradually developed into what are known as middle Indo-Aryan dialects. Between 600 B.C. and 1000 A.D.—the period of Aryan expansion, they gradually spread over northern India. The early literature of Buddhism is enshrined in Pali, one of the earlier Indo-Aryan dialects. By the 10th century A.D. the middle Indo-Aryan dialects gradually developed into modern Indo-Aryan languages.

Dravidian Languages have their home in peninsular India and include 12 distinct languages—*Tamil*, *Telugu*, *Kannada*, *Malayalam*, *Tudu*, *Kodagu*, *Todda*, *Kota*, *Gond*, *Khond*, *Oraon* and *Rajmahal*. These languages are spoken in the following regions or districts of India—south-eastern, north-eastern and south-western, the Malabar coast, Coorg (adjoining the Malabar coast), the Nilgiri Hills, Central India, north-west Orissa, and the Rajmahal Hills of W. Bengal. *Tamil*, *Telugu*, *Malayalam* and *Kannada* are the most important among them. *Tamil*, the oldest

member of the group, preserves a good deal of the general character and vocabulary of the ancient Dravidian speech : it has a most extensive vocabulary. Tamil is also spoken in the northern part of Ceylon. Malayalam is closely related to Tamil and has borrowed considerably from Sanskrit.

Primitive tribes speak *Austic Languages*, represented in the hills and jungles of central and north-eastern India. These languages are said to be related to those of South-East Asia. They are believed to have come to India with the invaders from the north-east long before the Indo-Aryan invasion. The following are the Austic languages :—

(a) *Kol* or *Munda* group which includes *Santhali*, *Mundari*, *Ho*, etc.

(b) *Khasi* in Assam and (c) *Nicobarese* in Nicobar Islands.

Sino-Tibetan Languages are used by small tribes along the southern slopes of the Himalayas, in North Bengal and Assam. These languages mostly belong to the Mongolian race. Newar of Nepal and Meithei or Manipuri are the most important among them.

Modern Indian Languages— A short description of the important modern languages is given below :—

Hindi, with its various branches, is the third most important language of the world after Chinese and English. This language is the spoken language in Bihar, U.P., in the major portion of Madhya Pradesh, Rajasthan, Vindhya Pradesh, in Bhopal. Delhi, Himachal Pradesh and also in the eastern half of Punjab. As the geographical extent of the language is very great, the masses use more than dozen allied local dialects, each one of which is equally important and is very rich in literary folk traditions. Within what is known as the Hindi-speaking area, various dialects are spoken and were once cultivated as literary languages but during the first decades of the 19th century, the *Khariboli*, one of the component dialects of Hindi, emerged as the standard and accepted form of Hindi over the whole of the Hindi-speaking area. It is the State language of Uttar Pradesh, Bihar and some other States of India.

Urdu—So far as *Urdu* and *Hindi* are concerned, they are basically the same language in points of structure, grammar and syntax and there is a considerable fund of vocabulary common to both. Three factors, however, contribute to their separation. Firstly, Hindi is written in Devanagiri script and Urdu in Persian-Arabic script. Secondly, owing to various historical and sociological association, Hindi has to be associated with the Hindus and Urdu with the Muslims. Thirdly, Urdu writers tend to draw upon Arabic and Persian for expanding their vocabulary and Hindi writers upon Sanskrit. Urdu originated from the dialect spoken round about Delhi. It became the spoken language of the Muslims when they settled in Delhi. In fact, it was at first the court or the camp language of the Mughals. In the State of Jammu & Kashmir, it is recognised as one of the State languages along with Kashmiri. In North India, more specially in Delhi, Punjab, Uttar Pradesh and Bihar, the use of Urdu has been widespread, though it is spoken by a minority chiefly living in towns.

Bengali is the language of about 88 million people and although less than half of this number is in West Bengal, there is identity of speech and culture which links up West Bengal in India with East Bengal in Pakistan. The whole of the Bengali people inherit a common literature.

which is one of the most significant facts in modern India. It is also spoken by majority of the people of the Cachar district of Assam and of Tripura. It is not only the most compact language of two Bengals, but also the most progressive language of India.

Bengali literature started with some songs and poems of the Buddhist mystic inspiration dating back to the 10th century A. D. After the establishment of the British rule in Bengal, Bengali as a language came in touch with English and, as a result, a veritable renaissance took place. A number of very eminent writers not only from Bengal but also from the whole of India, expressed themselves through the Bengali language—beginning with Raja Rammohun Roy, Iswar Chandra Vidyasagar, Michael Madhusudan Dutt, Bankim Chandra Chatterjee and, above all, Rabindranath Tagore. The emancipation of Indian mind through literature was first started in Bengal, and the galaxy of eminent novelists and other writers of the present era, among whom the name of Sarat Chandra Chatterjee deserves special mention, still hold the torch of India for rational thinking through literature.

Telugu—is one of the important members of the Dravidian group of languages and ranks second among the languages of India, next to Hindi only. This language seems to have branched out from the parent Dravidian tongue in the middle of the first millennium B. C.

Bhojpuri—is claimed to be the spoken language of about 4 crores of people living within an area of 250 lakh sq. miles. The districts of Saran, Champaran, Sahabad, Palamau and Ranchi (part) in Bihar, Ballia, Ghazipur, Banaras, Mirzapur, Gorakhpur, Azamgarh and Deoria in U. P. and Jaspur and Surguja in Madhya Pradesh comprise Bhojpuri-speaking area.

Marathi is spoken in western and central India. It covers parts of two States in India—Maharashtra and Madhya Pradesh. It is also spoken in Goa, Daman & Diu and in some parts of Hyderabad.

Gujarati is spoken in Gujarat, in the northern maritime portion of Maharashtra and also in Baroda and adjoining places.

Rajasthani is spoken in Rajasthan and in the adjoining parts of Central India. Rajasthani has numerous dialects.

Pahari is a general name applied to Indo-Aryan languages spoken in the lower ranges of the Himalayas, from Nepal to the east of Calcutta.

Konkani is largely spoken in the Belgaum district and in the adjoining areas of Mysore. It has no script of its own. Kannada, Devnagari or Roman script are now employed.

CENSUS OF INDIAN LANGUAGES, 1961

Hindi is the mother tongue of 133.4 million out of 489 million population of India, according to the language tables of 1961 census.

The total strength of the Hindi-speaking population (Bihar and Chattisgarh included) is 165.1 million. (This works out to about 37 per cent of the total population).

Besides, Hindi is the subsidiary language (other than the mother tongue) of 9.3 million people.

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The strength of the languages mentioned in Schedule VIII of the Constitution based on the number of people speaking them is : *Hindi*—133,435,450 ; *Telugu*—37,668,132 ; *Bengali*—33,888,939 ; *Marathi*—33,286,771 ; *Tamil*—30,652,098 ; *Urdu*—23,323,518 ; *Gujarati*—20,304,464 ; *Kannada*—17,415,827 ; *Malayalam*—17,015,782 ; *Oriya*—15,719,398 ; *Punjabi*—10,950,826 ; *Assamese*—6,803,466 ; *Kashmiri*—1,956,115, and *Sanskrit*—2,544.

The strength of the languages not mentioned in Schedule VIII of the Constitution is : *Bihari*—16,806,772 ; *Rajasthani*—14,933,016 ; *Santhali*—3,247,058 ; *Bhili*—2,439,611 ; *Gondi*—1,501,431 ; *Sindhi*—1,371,932 ; *Konkani*—1,352,363 ; *Hurukh-Oraon*—1,141,804 ; *Kumaoni*—1,030,254 ; *Nepali*—1,021,102 ; and *Pahari*—1,004,371.

Less than 7% of India's 439 million people knew an Indian language other than their mother-tongue, according to the 1961 census. The number of persons knowing English is a little more than 11 million. In fact English might be described as the most largely known subsidiary in India with a clientele which is even larger than that of Hindi as a subsidiary language (9.36 million). Maharashtra has the largest percentage of people knowing Hindi, 8.91%. West Bengal and Assam have 6.67% and 6.62% of their respective populations knowing Hindi, followed by Gujarat with 3.48%. In the southern States, the percentages are : Mysore 1.28%, Andhra 1.21%, Kerala 0.21% and Madras 0.20%. fii

The 14 languages mentioned in the Eighth Schedule of the Constitution are spoken by over 380 million people, i.e. about 87% of the total population.

Language-wise distribution of the population in 1961 was : *Hindi* 30.4%, *Telugu* 8.6%, *Bengali* 7.7%, *Marathi* 7.6%, *Tamil* 7.0%, *Urdu* 5.3%, *Gujarati* 4.6%, *Kannada* 4.0%, *Malayalam* 3.9%, *Oriya* 1.1%, *Punjabi* 2.5%, *Assamese* 1.6%, *Kashmiri* 0.49% and other languages 12.8%.

Important languages in States—The three numerically most important languages in each State in 1961 were : *Andhra Pradesh*—Telugu 95.97 per cent of the population, Urdu 7.75 per cent and Rajasthani 1.62 per cent, *Assam*—Assamese 57.14 per cent, Bengali 17.60 per cent and Hindi 4.41 per cent, *Bihar*—Hindi 44.3 per cent, Bihari 35.39 per cent and Urdu 8.93 per cent, *Gujarat*—Gujarati 90.50 per cent, Urdu 2.88 per cent, Sindhi 2.42 per cent ; *Jammu and Kashmir*—Kashmiri 54.42 per cent, Punjabi 27.48 per cent, Pahari 6.84 per cent ; *Kerala*—Malayalam 95.04 per cent, Tamil 3.12 per cent, Konkani 0.46 per cent ; *Madhya Pradesh*—Hindi 78.07 per cent, Rajasthani 4.98 per cent, Kannada 2.81 per cent ; *Maharashtra*—Marathi 76.55 per cent, Urdu 6.89 per cent and Hindi 3.11 per cent ; *Mysore*—Kannada 65.17 per cent, Telugu 8.68 per cent ; *Orissa*—Oriya 82.31 per cent, Kui 2.92 per cent and Telugu 2.24 per cent ; *Punjab*—Hindi 55.64 per cent, Punjabi 41.09 per cent, Urdu 1.26 per cent ; *Rajasthan*—Rajasthani 56.49 per cent ; Hindi 33.32 per cent, Bhili 4.13 per cent ; *Uttar Pradesh*—Hindi 85.39 per cent, Urdu 10.70 per cent, Kumaoni 1.39 per cent ; and *West Bengal*—Bengali 84.28 per cent, Hindi 5.43 per cent and Santhali 3.27 per cent.

Bengali language spoken in India—33,888,939.

Bengali Language spoken in Pakistan—Bengali is spoken by 55.5 p.c. of the population and stand first in the list of mother languages.

PRINCIPAL LANGUAGES OF THE WORLD

Twelve languages are spoken by more than five crores of people of the world. *Revolution In Books* published by UNESCO states that they are : Chinese, English, Russian, Hindi, Spanish, German, Japanese, Bengali, Arabic, French, Portuguese and Italian. It is interesting to note that Hindi and Bengali have fourth and eighth place amongst world's principal languages.

	Spoken in million		Spoken in million		Spoken in million
Arabic	... 83	Kannada	... 20	Rajasthani	... 17
Bengali	... 88	Korean	... 36	Rumanian	... 18
Burmese	... 16	Malayalam	... 17	Russian	... 170
Cantonese (China)	44	Malayese	... 72	Serbo-	
English	... 294	Mandarin (China)	505	Croat (Yugoslavia)	17
French	... 71	Marathi	... 34	Siamese	... 21
German	... 120	Min (China)	... 37	Spanish	... 159
Gujarati	... 22	Dutch	... 18	Tamil	... 37
Hakka (China)	... 19	Oriya	... 16	Telugu	... 41
Hindi	... 165	Persian	... 21	Turkish	... 27
Hungarian	... 13	Polish	... 33	Ukranian (USSR)	41
Italian	... 58	Portuguese	... 83	Urdu	... 55
Japanese	... 98	Punjabi	... 26	Vietnamese	... 26
Javanese	... 42	Pushtu	... 12	Wu (China)	... 40

POSTS & TELEGRAPHS

EARLY HISTORY— The first British postal system was introduced in 1766 by Lord Clive, but this was used mainly for official purposes. During the administration of Warren Hastings, Indian Posts were made available to the public for the first time and a regular organisation was set up in 1774 by Lord Dalhousie. The Act 17 of 1837 is the earliest enactment, establishing a public service in India. The Act 17 of 1854 placed the entire department under a Director-General and uniform rates were fixed for all-India. The first issue of postal stamps was made in India in Sind in 1825. They were of three kinds—(a) design embossed on white paper without colour; (b) blue embossed on white paper; (c) design embossed on vermillion wafers. The basis of authority of the existing postal system in India is the Act 6 of 1898.

The honour of laying the first experimental telegraph line from Calcutta to Diamond Harbour in 1839 goes to Dr. William B. O. Shannessy, a professor of Calcutta Medical College. It was then the longest telegraph line in the world—21 miles with a 7,000-foot river-crossing.

In October, 1851, the first official telegraph line was opened for traffic between Calcutta and Diamond Harbour. The construction of long-distance over-head telegraph line began in November, 1853 between Calcutta and Agra. The first telegraph message was sent over the circuit on March 24, 1854. Later on, this line was extended to Bombay on one side and to Peshawar on the other. Telegraph circuits were gradually extended to all parts till they reached 14,900 miles in March, 1867.

DEPARTMENT OF COMMUNICATIONS— In terms of the Presidential Order dated the 3rd May, 1964, the erstwhile Department of Posts and Telegraphs has been re-named as the Department of Communications. The Department of Communications is responsible for the administration of :—(i) *Posts and Telegraphs*; (ii) *Wireless Planning and Coordination*; (iii) *Overseas Communications*; (iv) *Indian Telephone Industries Ltd., Bangalore*; (v) *Hindustan Teleprinters Ltd., Madras*.

These subjects are administered through the undermentioned organisations, the Heads of which are indicated against each :—

(i) *Posts & Telegraphs Department* (Director-General, Posts and Telegraphs); (ii) *Wireless Planning and Coordination Wing* (Wireless Adviser to the Government of India); (iii) *Overseas Communications Service* (Director-General, Overseas Communications Service); (iv) *Indian Telephone Industries Limited, Bangalore* (Managing Director, Indian Telephone Industries Limited); (v) *Hindustan Teleprinters Limited, Madras* (Managing Director, Hindustan Teleprinters Limited.)

ORGANISATION OF THE POSTS AND TELEGRAPHS DEPARTMENT— The Indian Posts and Telegraphs Department comes under the administrative control of the Government of India, in the Department of Communications. The Secretary of the Department holds charge of the office of the Director-General, Posts and Telegraphs as also that of the Chairman of the Posts and Telegraphs Board. The Department is responsible for the development, maintenance and expansion of Postal, Telegraph, Telephone and Wireless Communication. In addition, it discharges certain agency functions like the work of Post Office Savings Bank, issuing National Savings Certificates and Postal Life Insurance Policies, collection of Broadcasting Receivers Licence fees and anti-piracy work relating thereto on behalf of other Departments of the Government.

Posts and Telegraphs Board— The Posts and Telegraphs Board was established on December 4, 1959. The Board has not only all administrative powers but also powers in matters of internal finance. The Board consists of a Chairman and 6 members—one each for Finance, Posts, Administration, Tele-communications Operations, Tele-communications Development, and Banking and Insurance.

The Member (Posts) is in charge of matters relating to Postal and R.M.S. subjects including Foreign Post, Mail Motor Services etc. He is responsible for staff and establishment matters and planning pertaining to Postal and R.M.S. Branches. The Member (Telecommunications Development) is in charge of Telecommunications, planning and development and Member (Banking & Insurance) is in charge of agency functions of the

Department such as Savings Bank, Savings Certificates, Postal Life Insurance and Small Savings. The Member (Telecommunications Operations) is in charge of matters relating to operation, traffic, rates and tariffs, maintenance and staff & establishment matters pertaining to Telegraph, Telephones and Wireless Branches. Member (Administration) is in charge of general service matters like disciplinary cases, O. & M., vigilance, publicity, petitions and welfare, and staff and establishment matters of the Directorate. Member (Finance) functions as the principal adviser on all financial matters.

Administrative Units— For administrative convenience, the country has been divided into a number of territorial and functioning units. There are at present 14 territorial units called P. & T. Circles, viz., Andhra, Assam, Bihar, Bombay, Central, Gujarat, Kerala, Madras, Mysore, Orissa, Punjab, Rajasthan, Uttar Pradesh, and West Bengal, and one functional Postal unit, viz., Delhi; five functional Telephone units at Bombay, Calcutta, Madras, Bangalore and Hyderabad; and two Telecommunication units in Delhi and Jammu & Kashmir and a number of other administrative units on all-India functional basis. The Department works as a commercial-cum-utility service and hands over a part of its surplus earning to the general revenues; rest accrues to the credit of the Department. The administration of the Department vests in the Posts and Telegraphs Board.

P. & T. TRAINING & RESEARCH CENTRE— The P. & T. Training Centre was opened at Saharanpur on April 2, 1951 to give intensive practical training to the operative staff. A Postal Training Centre was also started at Baroda on July 1, 1962.

SAVINGS BANK—Post Office Savings Bank Rules have been revised and made statutory with effect from 1-3-1965. The revised rules afford the following new facilities:—

- (i) An illiterate adult has been given the option of operating on his account through a literate agent.
- (ii) A Security Deposit Account may be opened for the purpose of pledging the same as guarantee for purchase of motor vehicle.
- (iii) No maximum limit for deposit has been fixed for single and joint accounts but interest will not accrue on a balance exceeding Rs. 15,000/- and Rs. 30,000/- respectively.
- (iv) A depositor has been permitted to withdraw any amount from his account at any time he desired without notice subject to availability of funds.

POSTAL PROGRESS

(1) Urban Mobile Post Offices scheme is in operation at Nagpur, Madras, Delhi, Bombay and Calcutta on all days of the week including Sundays and holidays.

(2) An Inland Night Air Mail Service links up the principal cities of India, namely, Bombay, Calcutta, Madras, Delhi and Nagpur. Under the *all-up scheme*, inland letters, letter cards, post cards and money orders are normally carried by air without any air surcharge.



List of stamps
issued during
1965

(See page 233)



List of stamps
issued during 1965

(See page 233)

(3) Air Parcel Service with foreign countries.

(4) Facilities are available at most post offices for depositing Savings. Indian Postal Department delivers 2 crores of letters, 4 lakhs of telegrams and 2 lakhs of parcels. The number of Post Offices in India at present is 96,596. The number of Letter Boxes installed in urban and rural areas were 45,886 and 143,394 respectively on 1st December, 1964.

The total staff (including Audit & Accounts) employed in the Posts & Telegraphs organisation as on 31st March, 1964 was 457,888 Non-Gazetted Officials and 2,309 Gazetted Officials.

The total number of policies for Postal Life Insurance accepted from April 1964 to December, 1964 was 9,715 for Rs. 2,48,41,400.

TELEGRAPH SERVICE—The telegraph service in India celebrated its centenary in November, 1953.

Indian telegraphs is the oldest Government-owned public utility in the world. The number of Telegraph Offices (including licensed offices) in 1963-64 was 1,14,000. The total number of leased Telegraph Circuits in 1964-65 was 542.

The Telegraph Service in Hindi and other Indian languages—was introduced in 1949. This facility is now available in about 2,210 offices in the country. Telegrams can be sent in any Indian language, provided they are written in Devnagari script.

Greetings Telegrams—Over 1.55 million Greetings Telegrams in English and 12,000 in Devnagari script were delivered in pictorial forms and envelopes during 1964-65.

Printogram Service—was introduced on 1st March, 1956, which is designed to provide a direct teleprinter service between the subscriber and the telegraph office. *Flash message* was introduced in April, 1947 for the Press. These telegrams receive a higher priority.

Another class of telegram, known as *Human Life telegram*, also receives priority in transmission over all express telegrams in the case of accidents, serious illness or death of a person.

Photo telegrams are accepted for the U.K., U.S.A., Canada, Egypt, Australia, South Africa, Finland, Sweden, Belgium, Denmark, Greece, Germany, Italy, Portugal, Switzerland, Norway, Japan, U.S.S.R. and France at special rates.

Telegrams to follow has been introduced in the case of foreign telegrams, which enables the sender, who is not quite sure about the exact place at which the addressee will be found, to give various addresses at which the addressee will be found, also to give various addresses at which the telegram is to be successively presented.

De-luxe telegram has been re-introduced in foreign countries.

Phonogram Service—By the introduction of this service, messages are booked through telephones and telegrams are dictated to the addressees over telephones. The total number of stations provided with Phonogram facility on 31st December, 1964 was 957.

Telex Service—National Telex Service was inaugurated on June 24, 1963. This is the latest facility for speeding up communication within the country. *Telex* is the short name for 'teleprinter exchanges'. *Teleprinters* are machines by which telegraphic messages are sent in a typed

form making use of the telephone exchange system. With the help of the Telex, typed messages can be sent and received directly without intermediates or delay from one subscriber to another in any part of the country or even abroad. The subscribers are generally newspapers, business houses or government offices. The new National Telex Service links up Bombay, Delhi, Madras and Calcutta. The total number of Teleprinters in use as on 31st December, 1964 was 2,632 including 72 Teleprinters in Devnagari script.

TELEPHONES— Only 5 years after the invention of telephone by Bell in 1876, India had a 50-line telephone exchange in Calcutta in 1881. Though India was almost one of the first countries in the world to have a telephone exchange, Calcutta was the first place to have it. Calcutta has the largest number of telephones in any single city in India. The first automatic telephone was installed in India at Simla with 700 lines in 1913. To facilitate telephone expansion, "*Own your own telephone*" scheme was introduced in 1949. Under this scheme, a sum of Rs. 2,500 in Bombay and Calcutta and Rs. 2,000 in other places is realised in advance from the subscriber for a telephone connection for 20 years. The maintenance charge is Rs. 2 per month. This scheme is in operation at Ahmedabad, Amritsar, Bangalore, Bombay, Calcutta, Delhi, Hyderabad, Kanpur, Madras, Nagpur and Verawal. The total number of connections given under this scheme upto 31st December, 1964 was 77,843. "*Own your exchange*" scheme was introduced in 1949. Under this scheme, the Department undertakes to open a 50-line exchange if institutions, firms or individuals advance a loan of Rs. 50,000 at $2\frac{1}{4}$ per cent interest per annum. This loan is repayable after 20 years. Under the *measured rate system*, a subscriber pays for every additional call over a prescribed number of free calls every quarter plus a fixed quarterly rental. Under *ship to shore service*, the subscribers can have telephonic contact with ships at sea within 500 miles of the respective exchange.

There were 10,494 Telephone Exchanges in India in 1963-64.

The number of Telephones in India has increased to 7,32,000.

Tele-communication Research Centre—A research organisation was set up in 1955-56, which has undertaken a number of works and has started functioning with a small staff.

Telephone Industry—The *Indian Telephone Industries Ltd.* Bangalore, owned jointly by the Government of India, Government of Mysore and Automatic Telephone and Electric Company Ltd. of England, manufacture telephones, automatic telephone lines and various types of carrier equipment. This fifteen-year old Collaboration Agreement expired on May 3, 1963. It has achieved the Third Plan target of three lakh new telephones in 1964. Till the end of November 1964, Rs. 513.46 lakhs worth of goods were sold. During 1964-65, goods worth Rs. 8 lakhs (approximately) were exported. The authorised capital of the company was raised to Rs. 5 crores during 1964-65. The total staff strength of the company as on 1st December, 1964, was 10,597 (See *Index*).

WIRELESS— India has a wireless communication system, which serves several useful purposes. Wireless stations maintain contact between fixed points as a stand-by to telegraph system, in case of break-down

of the latter. Stations at coastal places maintain contact with ships at sea and also aircraft flying over sea. Such stations have been established at Bombay, Calcutta, Madras and also at some minor ports. Meteorological stations exchange weather data with ships and also with other countries. Three Wireless Divisions with headquarters at New Delhi, Poona and Calcutta, are entrusted with the higher technical maintenance of wireless stations, besides execution of projects for the development of the wireless network.

The three Wireless Divisions work under the direct control of the Wireless Section of the Posts and Telegraphs Directorate and are responsible for the periodic overhaul and higher technical maintenance of the transmitters, receivers, radio-telephone terminals and the radio-teleprinter receiving assemblies.

The four Monitoring Stations are located at Delhi, Nagpur, Bombay and Calcutta. There are three temporary stations at Shillong, Srinagar and Gorakhpur. The monitoring stations are now equipped for monitoring for the purpose of frequency management and licensing, for obtaining information, for the clearance of interference and for finding new channels in the frequency spectrum.

Hindustan Teleprinters Limited, Madras— was registered as a Government Company on the 14th December, 1960, for the manufacture of teleprinters and ancillary equipment in technical collaboration with Messrs. Ing. C. Olivetti & Co., S.P.A., Ivrea, Italy. The Company is being run as a Private Limited Company fully-owned by the Central Government, with an authorised capital of Rs. 3 crores. As on 1st December, 1964, the paid-up capital of the Company was Rs. 82 lakhs. The Government of India have also given loans totalling Rs. 110 lakhs. The installed capacity of the factory is 1320 unit teleprinter machines per year. Upto the end of November, 1964, the Company produced 454 unit teleprinter machines (See Index).

OVERSEAS COMMUNICATIONS— The Overseas Communications Service which was nationalised in 1947, is responsible for the working of radio-telegraph, radio-telephone, radio-photo and telex services between India and other countries. The first foreign electrical communication between India and other countries was established by an undersea cable connecting Bombay with London. It now functions under a Director-General with two main branches (Traffic and Engineering) and four gateway centres at Bombay, Calcutta, New Delhi and Madras.

Other services, such as news transmissions on behalf of the Government and leased circuits, have been made available to 12 of the leading airline companies and other parties in India.

The Overseas Communications Service is a separate department headed by a Director-General with his headquarters at Bombay.

The following are the services carried on by the Overseas Communications Service—

- (1) Radio-photo service.
- (2) Radio-telegraph service.
- (3) Radio-telephone service.
- (4) International Telex Service. This service enables the subscribers

to exchange telegrams on teleprinter machines direct with the subscribers of other countries. It was introduced for the first time in India in June, 1960. Through these direct telex connections with international networks, telex service is now available with 53 countries.

(5) Press news cast service.

(6) Submarine Cable Telegraph Service.

(7) Wireless monitoring service at Bangalore, Bombay, Calcutta, Delhi and Jabalpur.

(8) Inland photo-telegram service was inaugurated for the first time between Bombay and Delhi on January 26, 1955.

India now has 29 direct wireless telegraph services with foreign countries working a total of 33 operating channels. India has 30 direct radio-telephone links with a total of 39 operating channels.

The growth and development of the Overseas Communications Service are reflected in the following figures of investment and traffic growth over the past few years :—

Years		Radio-Telegraph Words	Radio-Telephone Minutes	Radio-photo Sq. cms.
1947-48	...	7,59,76,066	28,841	26,980
1950-51	...	7,00,80,402	51,962	27,100
1955-56	...	7,83,37,917	1,38,614	1,24,825
1960-61	...	7,76,88,451	2,57,863	3,46,400
1962-63	...	8,77,41,208	2,63,104	2,62,030
1963-64	...	8,84,96,289	2,54,412	3,19,051

	Telex		
Years		Calls	Minutes
1960-61	...	1,136	12,794
1962-63	...	9,382	70,238
1963-64	...	15,132	103,052

	Leased Channels			
Years			No. of Circuits	Revenue (Rs.)
1957-58	...	...	3	4,79,333
1960-61	...	...	13	20,90,042
1962-63	...	...	21	37,53,162
1963-64	...	...	21	36,20,170

Satellite Communications— The overseas telecommunication traffic is at present handled on high-frequency radio systems and low-capacity submarine cables. Recent developments in the technique of radio communications have made communications through Space Satellites a commercial proposition. Two Agreements establishing interim arrangements for a Global Commercial Communications Satellite System were signed by a number of countries recently. India signed these Agreements on the 19th February, 1965. The Agreements envisage the establishment of a Global Commercial Communications Satellite System by the end of 1967. The capital cost of the system will be approximately \$200 to \$300 millions.

to be shared by the signatory Governments in proportion to the quotas assigned to them under the Agreements. India's share of the capital cost of the system has been fixed at 0.5% of the total cost. The Agreements are subject to approval by the Government of India.

PHILATELIC PROGRAMME OF POSTAL DEPARTMENT—

There is a *Philatelic Advisory Committee* in Delhi, which advises the Posts & Telegraphs Department for the issue of new stamps.

A *Philatelic Museum* has been set up by P. & T. Department. It shows Department's collection of rare stamps.

List of Stamps issued in 1965

- 7th January—Jamsetji Tata—15 P.
- 28th January—Lala Lajpat Rai Birth Centenary—15 P.
- 8th February—XXth Congress of the International Chamber of Commerce—15 P.
- 5th April—National Maritime Day—15 P.
- 15th April—Death Anniversary of Abraham Lincoln—15 P.
- 17th May—Centenary of the International Telecommunication Union—15 P.
- 27th May—Jawahar Jyoti : First Death Anniversary of Nehru—15 P.
- 26th June—International Co-operation Year—15 P.
- 15th August—Indian Mt. Everest Expedition, 1965—15 P.
- Plucking Tea—15 P.
- 10th September—Pandit Govind Ballabh Pant—15 P.
- 31st October—Sardar Vallabhbhai Patel—15 P.
- 5th November—Deshbandhu Chittaranjan Das—15 P.
- 14th November—Atomic Reactor, Trombay—Rs. 10/-.
- 17th November—Vidyapati, celebrated Poet of Mithila—15 P.

POSTAL TRAFFIC & REVENUE

	No. of Postal articles (in crores)	Postal revenue (in crores of Rs.)
1951	227.0	21.04
1955-56	229.7	29.43
1960-61	402.9	40.78
1961-62	431.2	45.62
1962-63	481.9	50.90

TRAFFIC STATISTICS

	1948-49	1963-64 Actual	1964-65 Estimates
Postal Articles (in millions)	2,264	5,385	6,015
Money Orders (in millions)	44.9	94.2	103.6
Registered Articles (in millions)	75.8	142.8	149.8
Savings Bank Transactions (in millions)	9.09	36.4	41.8
Telegrams (in millions)	27.1	41.8	43.1
Trunk Calls (in millions)	4.4	46.6	52.7
Value of Money Orders issued (in crores)	150	419.0	452.5
Telephones (in thousands)	120	665	761

POSTAL STATISTICS, 1963-64

No. of post offices	... 9,23,000	No. of insured articles	...	47
Kilometrage of surface mail routes	... 6,09,000	(in lakhs)	...	
Kilometrage of air mail routes	... 56,000	No. of money orders	...	8.6
No. of postal articles handled (in crores)	... 481.9	(in crores)	...	
		Postal revenue (in crores of Rs.)	...	50.9

TELEPHONE STATISTICS, 1963-64

No. of Telephones	7,32,000	No. of trunk calls (in lakhs)	4.12
No. of Telephone exchanges	10,494	Telephone revenue (in crores of Rs.)	35.1

TELEGRAPH STATISTICS, 1963-64

Number of telegrams (in lakhs)	... 4.07	Kilometrage of overhead wires	... 19,94,000
Revenue (in crores of Rs.)	11.6	No. of telegraph offices	1,14,000

POSTAL LANDMARKS

1825—1st Indian postage stamp issued at Karachi for Sind only.

1830—First overland post between England & India established when steamer 'Huge Lindsay' made the first voyage from Bombay to Suez.

1840—P. & O. obtained charter for mails between London and Suez en route to India.

1851—First Govt. telegraph line opened between Calcutta and Diamond Harbour.

1854—1st postage stamp on all-India basis issued on 1st October.

1929—U.K.-India Air Mail Service started on 4th April.

1931—New Delhi inauguration commemoration stamp issued.

1935—Silver Jubilee of King George VI stamp first issued.

1942—Airgraph Service started on 2nd February.

1943—Photo Telegram Service introduced.

1946—Two-Pice Post Card re-introduced on 1st July.

1865—First telegraph line opened between England and India, 27th January.

1870—G. P. O., Calcutta was opened.

1871—V. P. system established.

1877—V. P. system started.

1880—M. O. system introduced.

1885—Postal Savings Bank started.

1888—M. O. system started.

1911—First official Air Mail flight on 18th Feb., when letters were flown from Allahabad to Naini Junction.

1947—Overseas Telecommunications Service nationalised on Jan. 1.

1949—Telegraph transmission in Devnagari script introduced in Jan.

1954—Indian Postage Stamp Centenary on 1st October and International Postal-cum-Philatelic Exhibition.

1957—Postage stamps and sale of postage stationery in decimal coinage introduced on 1st April.

BROADCASTING

EARLY HISTORY—Organised broadcasting in India was started by a private concern, the *Indian Broadcasting Company*, at Bombay and Calcutta in 1927. This venture, however, went into liquidation in 1930. Radio dealers and radio owners urged Government to take some action and the Government of India agreed to run radio stations as an experimental measure for a short time. In 1932, the Government of India decided to continue broadcasting under the control of the Department of Industries and Labour. In March, 1935, the broadcasting organisation was constituted into a separate Department under the Department of Industries and Labour. On June 3, 1936, All-India Radio replaced the earlier designation of the Indian State Broadcasting Service. The Second World War gave a new fillip to broadcasting in India which by 1940, had nine stations. At the time of partition of India in 1947, A. I. R. was left with six stations at Delhi, Bombay, Calcutta, Madras, Lucknow and Tiruchirappalli.

ORGANISATION—Broadcasting in India is the exclusive responsibility of the Central Government. All-India Radio is under the *Ministry of Information and Broadcasting*. It includes the experimental television set at Delhi. The whole organisation is controlled by a Director-General, assisted by several Deputy Directors-General and a Chief Engineer.

At present, A. I. R. has 34 Radio Stations grouped into following 4 Zones—

North—Delhi, Lucknow, Allahabad, Patna, Jullundur, Jaipur, Simla, Bhopal, Ranchi and Indore.

West—Bombay, Nagpur, Ahmedabad, Poona, Rajkot, Goa and Bhuj.

South—Madras, Tiruchirappalli, Vijayawada, Trivandrum, Kozhikode, Hyderabad, Bangalore and Dharwar.

East—Calcutta, Cuttack, Gauhati, Kurseong, Kohima, Imphal and Port Blair.

The 34th Radio Station at Bhuj was inaugurated on October 10, 1965.

There are two Radio Stations at Kashmir, one at Srinagar and the other at Jammu. Radio Goa is at Panjim. The auxiliary transmitting centres are located at Ajmer, Bikaner, Cuddapah, Raipur, Sambalpur, Sangli, Siliguri, Jeypore (Orissa), Gwalior, Jabalpur, Tirunelveli, Trichur, Varanasi and Visakhapatnam. The number of transmitters, studio centres and receiving centres on 31st March, 1964 were 93, 38 and 42 respectively. There were 37,36,688 Broadcast Receiver Licences in force, as on December 31, 1963. There were also about 600 Television Receivers in operation at the end of November 1964.

LANGUAGES & DIALECTS—The broadcasting system in India differs from most of the broadcasting systems of the world in one important respect. A.I.R. broadcasts its home programmes in a larger number of languages. There are 14 major languages mentioned in the Indian Constitution. A.I.R. broadcasts in all of them and in addition, in English, Dogri and Sindhi.

Vividh Bharati— This programme is now broadcast on medium wave from 21 centres and is also radiated by the original powerful short-wave transmitters at Bombay and Madras. The medium-wave Vividh Bharati centres are Bangalore, Bombay, Cuttack, Delhi, Indore, Kanpur, Madras, Patna, Rajkot, Vijayawada, Bhopal, Calcutta, Dharwar, Hyderabad, Jaipur, Nagpur, Poona, Lucknow, Tiruchirapalli, Srinagar and Chandigarh.

TRAINING FACILITIES FOR STAFF— A *Staff Training School* has been set up at New Delhi, which offers general as well as specialised courses of training to professional broadcasters as well as to the programme staff of AIR.

An *Engineering Staff Training School* was set up in 1958 to train new recruits who have sufficient practical and theoretical background of radio engineering, and to provide refresher courses to engineers who have spent considerable time on the practical side of A.I.R.

ADVISORY COMMITTEES & PANELS— Various Advisory Committees have been constituted by AIR with the object of assisting the same in the planning and presentation of different categories of programmes. The *Central Programme Advisory Committee* advises AIR on general principles of planning and presentation of programmes. The *Central Advisory Board for Music* lays down the music policy for the guidance of AIR. The *AIR Liaison Committee* maintains effective liaison with the radio trade and industry. A four-man committee of advisers has been appointed by AIR to advise AIR on the selection, training and utilization of young talent for broadcasting commentaries on cricket matches, on June 15, 1965. At the Stations there are (1) *Programme Advisory Committee* at all Stations, (2) *Rural Advisory Committee*, (3) *Consultative Panels for Educational Broadcasts and Panels for University Programmes*, (4) *Advisory Committee for Industrial and Tribal Programmes*.

NEWS SERVICES— News bulletins in the Home Services of AIR are broadcast from Delhi, 6 times in English and 4 times in Hindi each day; in Bengali, Oriya, Tamil, Telugu, Kannada, Malayalam, Punjabi, Marathi, Gujarati, Assamese and Urdu 3 times a day; in Kashmiri and Dogri twice a day; in Gorkhali once a day. A bulletin is also broadcast for troops in Hindi and Gorkhali once a day. Daily commentaries are also broadcast in Kashmiri, Urdu, NEFA-Assamese and Bengali.

132 bulletins in 29 Indian and foreign languages are broadcast daily.

The daily parliamentary commentary is broadcast in English and Hindi during the sessions of Parliament.

EXTERNAL SERVICES— Programmes are broadcast in 17 languages practically round the clock for listeners in Asia, Australia, New Zealand, Africa, and Europe. Broadcasts for people of Indian origin abroad are directed to many parts of the world.

MONITORING SERVICES— These services keep the External Affairs, Defence and other Ministries of the Government of India posted with trends of foreign broadcasting from different radio stations of the world. Monitoring units located at Simla and Delhi and connected by teletype lines with the News Room, have been able to serve as the main

supplementary source of foreign news to what was supplied by Reuter and Associated Press.

TRANSCRIPTION AND PROGRAMME EXCHANGE UNIT—

This Unit continues to supply to all Stations of AIR the selected recordings and scripts, thus enabling them to give quality programmes at minimum cost. During 1964-65, a total number of 1,087 scripts and 7,091 recordings were supplied.

EXTERNAL SERVICES DIVISION— continues to broadcast 34 news bulletins in 17 languages for 22 hours and 30 minutes per day. The chief aim of these broadcasts is to project India's point of view on current events in the domestic as well as the international field, to stimulate interest in our art and culture, and to inform the outside world of new developments and changing conditions in India.

JOURNALS AND PUBLICATIONS— Radio programme journals are published in English and in 7 regional languages, viz., Urdu, Assamese, Hindi, Bengali, Tamil, Telugu and Gujarati for home listeners, and journals and bulletins in 9 foreign languages for overseas listeners.

RESEARCH— To solve technical problems concerning broadcasting in India, a special department has been created. Ionospheric data are regularly compiled to explore frequencies which would give optimum reception to AIR's home as well as external broadcasts. Fading and atmospherics which interfere with broadcast reception are also studied. The Research Unit pays special attention to the development of indigenous acoustic materials and low-frequency absorbing systems for effecting improvements in AIR studios.

Listener Research Unit makes comprehensive all-India study of listening to various news bulletins broadcast from Delhi. The Research Department is responsible for the satisfactory working of the Receiving Centre through which the performances of AIR Stations are watched.

Maintenance Department is responsible for the maintenance and performance of service standards of the equipment used in AIR for the procurement and distribution of essential spares from abroad, for guidance on the technical problems of the Stations in their day-to-day activities.

AIR has set up a research organisation with headquarters in New Delhi to conduct surveys of the listening habits of the people. The office is known as *Directorate of Listeners Research*.

TELEVISION— AIR's Television Service made a modest beginning at New Delhi on the 15th September, 1959. There are at present 666 television sets in Delhi, New Delhi and Bombay.

A pilot plant to manufacture television receiving sets has been set up at Pilani (Rajasthan). Designed by the Central Electronics Research Institute, Pilani, the plant will reach its annual production capacity of 1,000 receivers within a year. A 43-centimeter set has already been tried and demonstrated.

The Govt. of India have constituted a Committee of experts to advise All India Radio on technical aspects of TV development in India. The Committee will also help bring up TV service in conformity with highest international standards by advising on new methods and techniques of telecasting.

The Chanda Committee on mass communication media has signed its report on TV in India. The Committee favours the establishment of an independent TV Corporation in India, free from the influence of broadcasting.

NUMBER OF BROADCAST RECEIVER LICENCES

(In force upto December 31, 1963)

Total Broadcast Receiver Licences in India	...	...	36,02,422
Maharashtra	... 5,09,521	Andhra Pradesh	... 2,16,464
West Bengal	... 4,95,332	Mysore	... 1,90,688
Punjab, Himachal Pradesh	...	Delhi	... 1,88,015
and Jammu & Kashmir	3,95,876	Bihar	... 1,26,643
Madras	... 3,76,645	Rajasthan	... 1,09,244
Uttar Pradesh	... 2,95,773	Kerala	... 94,489
Gujarat	... 2,78,782	Assam	... 48,241
Madhya Pradesh	... 2,29,522	Orissa	... 45,187

IMPORTANT BROADCASTING DATES

- 1927—Private Indian Broadcasting Company started at Bombay and Calcutta.
- 1932—Government of India undertook radio service as Indian State Broadcasting Service.
- 1936—New name of 'AIR' adopted by replacing the old name 'Indian State Broadcasting Service.'
- 1959—AIR's Television Service made modest beginning on 15th September.
- 1961—Silver Jubilee of AIR celebrated on 8th June.
- 1962—Goa station of AIR at Panjim inaugurated on 9th January.

PRESS & PUBLICATIONS

BEGINNING OF INDIAN PRESS—The Indian journalism had its first beginning when James Augustus Hickey started his *Bengal Gazette* on January 29, 1780 at Serampore near Calcutta. Hickey's venture was followed by a number of others in quick succession. The most significant of these was the *John Bull in the East* in 1821, which was subsequently changed into the *Englishman*.

The development of the Indian Press was conditioned by the political stimulus that gave rise to it but it had been a long history of trials and tribulations. The Indian Press had to struggle against several statutory disabilities. The conflict, which began with the notorious *Vernacular Press Act, 1878*, continued unabated. Other more drastic measures followed, such as *Newspapers Incitement to Indian States Act of 1922*, *Official Secrets Act of 1923*, *Indian Press (Emergency Powers) Act of 1931*, *Foreign Regulations Act of 1932*, *Indian States (Protection) Act of 1934*, etc., etc.

During the Second World War, when the relations between the British Government and the Press were considerably strained, a 'gentlemen's

agreement was concluded between the Government and the Press resulting in the formation of a *Press Advisory Committee* at the Centre and in many provinces. This gave the Press a consultative status.

In March, 1947, the Government appointed a *Press Laws Enquiry Committee* to enquire into the Press laws and recommend necessary changes. The Committee's recommendations on May, 1948 were among others, the repeal of certain obnoxious Press laws and the modifications of the others.

FREEDOM OF THE PRESS— Unlike American and some other Constitutions in which freedom of the Press is mentioned as one of the fundamental freedoms, the Indian Constitution does not specifically mention freedom of the Press; the Fundamental Rights clause of the Indian Constitution treats freedom of the Press as an aspect of the larger "freedom of expression."

Article 19 (1) of the Constitution guarantees "the right to freedom of speech and expression to all citizens." This freedom has been interpreted by the courts to include freedom of the Press under the Constitution (First Amendment Act of 1951). Parliament can pass legislation reasonably restricting this right "in the interest of the security of the State, friendly relations with foreign States, public order, decency or morality or in relation to contempt of court, defamation or incitement to an offence." The words "reasonable restriction" make such legislation justifiable.

PRESS LAWS— *Prize Competition Act 42 of 1955* prohibited the running of cross-word competitions in which prizes for more than Rs. 1,000 are offered. The promoters of the competitions offering prizes upto Rs. 1,000, are required to take out licenses and also keep regular accounts for showing them to the licensing authority.

There are few Central laws relating to the Press : (1) *The Press and Registration of Books Act, 1867*, as amended in 1955. It regulates printing presses and newspapers in India, preservation of copies of books and newspapers printed in India and the registration of such books and newspapers, and provides for the appointment of a Press Registrar of newspapers. The Press Registrar is authorised to issue certificates of registration to newspapers. *The Press and Registration of Books (Amendment) Bill, 1965* was adopted by Lok Sabha on September 14, 1965. The amended act extends the provisions of the original Act of 1867 to the State of Jammu & Kashmir; (2) *The Working Journalists (Conditions of Service) and Miscellaneous Provisions Act* is an Act to regulate certain conditions of service of working journalists and other persons employed in newspaper establishments. *The Working Journalists Act* was amended in 1962 to provide for payment of gratuity to a working journalist if he voluntarily resigns on any ground whatsoever after a total service of 10 years and also on ground of conscience if his total service is not less than three years. It also provides for the setting up of Wage Boards for journalists from time to time. Under this provision the Govt. of India appointed the second Wage Board for working journalists on November 13, 1963; (3) *The Delivery of Books and Newspapers (Public Libraries) Act 27 of 1954* makes it obligatory for the publisher of every newspaper, to supply free of charges and at his own expense, a copy of each issue of such newspaper to each of such public libraries as may be notified by the Central

Government, within 30 days of its publication; (4) *The Parliamentary Proceedings (Protection of Publication) Act 24 of 1956* protects the publication of reports of the proceedings of Parliament and provides that no person shall be liable to any proceedings, civil or criminal, in respect of publication in a newspaper or by means of wireless telegraphy, of a substantially true report of any proceedings of either House of Parliament, unless the publication is proved to have been made with malice; (5) *The Drugs and Magic Remedies (Objectionable Advertisements) Act 21 of 1954* provides to control the advertisement of drugs in certain cases, to prohibit the advertisement for certain purposes of remedies alleged to possess magic qualities and the matters connected with them; (6) *The Copyright Act 14 of 1957* amends and consolidates the laws relating to copyright in India.

Young Persons (Harmful Publications) Act, 1956 and *Criminal Law Amendment Act, 1961* were passed. The first Act makes production, sale, circulation, etc., of such publications in the country a cognizable offence punishable. The second was passed to stop recent developments adjoining the borders of India which affect the security of the country and its frontiers.

COPYRIGHT— *Copyright Act of 1957* came into force in January, 1958. It provides for the establishment of a Copyright Board for adjudicating on certain matters specified in the Act. The Govt. of India also ratified the Universal Copyright Convention and it came into force in India from January 21, 1958. The Government have also extended the operation of the 1957 Act to the works of more than 20 foreign countries.

NEWSPRINT— The supply of newsprint in the country rose by 61.3 per cent from 77,872 m. tonnes in 1957-58 to 1,25,598 m. tonnes in 1963-64. The supply of newsprint in 1964-65 is estimated at 1,27,500 m. tonnes, including 30,000 tonnes produced in India. Per capita consumption of newsprint was 0.19 kgs. in 1957-58, 0.23 kgs. in 1960-61 and 0.27 kgs. in 1963-64.

DEFINITION OF A NEWSPAPER— There is a conflict as to the definition of 'newspaper' according to the Indian Post Office Act, and the Press and Registration of Books Act. The Press and Registration of Books Act says, "Newspaper means any printed periodical work containing public news or comments on public news", whereas according to the Indian Post Office Act, every publication, consisting wholly or in great part of political or other news or of articles relating thereto or to other current topics, with or without advertisements, shall be deemed a newspaper subject to the following conditions, namely, (a) that it is published in numbers at intervals of not more than 31 days, (b) that it has a *bona fide* list of subscribers.

In view of these conflicting opinions, a concessional postal rate has been introduced for periodicals which do not strictly conform to the definition of 'newspaper' of the Indian Post Office Act. Under the new notification, all periodicals under valid declaration which do not come within the definition of 'newspaper' of the Post Office Act, are now transmitted by the Post Offices at the rate of 8 Ps. upto 100 grams and 3 Ps. for every additional 50 grams subject to the condition that the periodical

is registered with the Registrar of Newspapers and bears in print at any convenient place, either on the first or last page thereof, the superscription "Registered with the Registrar of Newspapers for India under No—."

CHAINS, GROUPS AND MULTIPLE UNITS OF NEWSPAPERS—

The Registrar of Newspapers for India has divided the newspapers as follows—

Chains—more than one newspaper under common ownership from more than one centre.

Groups—more than one newspaper under common ownership from the same centre.

Multiple Units—more than one newspaper of the same title, language and periodicity under common ownership.

CLASSIFICATION OF NEWSPAPERS, PERIODICALS ETC.—

For this classification, the definition of UNESCO has been accepted, which broadly divides *newspapers* into two categories, namely, *General Interest Newspapers* and *Periodicals*. 'General Interest Newspapers' is defined as any publication put on sale to the general public, which serves as an initial source of written news of current events in the field of public affairs, politics, government, etc. The term 'initial source' is used in order to exclude periodicals, such as weekly news magazines.

UNESCO also defines *periodical* other than a general interest newspaper as a publication which appears under the same title at regular intervals but more than once a year and whose contents vary widely ranging from information of a general nature to trade, technical and professional subjects. UNESCO's definition covers all periodicals published weekly or at longer intervals except annuals.

Newspaper Categories—For the sake of classification, the Government of India have divided the papers into *A* and *B* categories. *B* category includes market bulletins, commercial circulars, magazines of educational institutions, house magazines and publicity journals, serialised fiction, journals on astrology, and miscellaneous including racing calendars, price-lists, law reports, etc.

The Govt. of India have defined *monopoly of newspapers* as follows : a monopoly is deemed to exist where more than 50 p.c. of the circulation in a particular region or language is controlled by one person or by one group of interconnected companies, such as the *Hindu*, English daily of Madras, controlling 57.8 p.c. in Madras State the *Statesman*, English daily of Calcutta controlling 52.9 p.c. in West Bengal.

OWNERSHIP—In 1964, there were 63 common ownership units owning 195 papers with a combined circulation of 51.98 lakhs. The number of dailies under common ownership increased from 143 in 1963 to 147 in 1964.

PAPERS CONTROLLED BY POLITICAL PARTIES—Congress Party—31 ; Communist Party—22 ; Praja Socialist Party—6.

DAILY PRESS— Number of languages in which there were dailies in 1964 was 19. Hindi had the largest number of dailies (149). The number of papers per lakh inhabitants in India in 1964 was 1.7. The daily circulation per thousand persons was the highest in Malayalam (36.8 p.c.). There were 10 dailies with a circulation over one lakh each in 1964. The

highest circulation attained by a daily in 1964 was 1,61,809 by *Ananda Bazar Patrika* (Bengali). Uttar Pradesh had the largest number of dailies (80).

PERIODICAL PRESS— The number of periodicals in 1964 was 7,601. There were 9 weeklies with circulation above one lakh in 1964. The highest circulation attained by a weekly in 1964 was 3,05,146 by *Kumudam* (Tamil). There were 5 periodicals (other than weeklies) with circulation above one lakh in 1964. The highest circulation attained by such a periodical in 1964 was 1,41,339 by *The Hindu Survey of Indian Industry* (English annual). English claimed the largest circulation of periodicals (37.61 lakhs). English also had the largest number of periodicals (1,646). Among the States Maharashtra had the largest number of periodicals (1,094). There were, in 1964, 2,311 weeklies, 847 fortnightlies and 3,365 monthlies.

PRESS COUNCIL

Press Council Bill was introduced in the Lok Sabha in July, 1956, and passed with a few amendments. With the dissolution of the first Lok Sabha in April, 1957 the bill lapsed. The establishment of a Press Council was recommended by the Press Commission which was appointed by the Govt. of India in 1952. It provides for a statutory council. The object of the Council is to preserve the liberty of the press and maintain and improve the standards of newspapers in India.

The Council consists of a Chairman and 25 other members. The Chairman is nominated by the Chief Justice of India.

Press Council Act seeks to establish an autonomous body entrusted with the task of acting as a 'watchdog' of the freedom of the press in India.

LATEST PROGRESS

With 514 dailies published in 44 languages, India's multilingual press presents a richer variety than what any continent has to offer. With a total circulation for all dailies (in 1963) of 57.32 lakhs, India had only 12 copies of a daily newspaper per thousand inhabitants, as against 506 in the U.K., 416 in Japan, 36 in Ceylon and 20 in the U.A.R.

Circulation of newspapers and periodicals during 1964 went up by 6.2% according to the ninth annual report of the Registrar of Newspapers for India. There had been an increase in the number of dailies by 11 weeklies by 148, bi-weeklies and tri-weeklies by 3 and other periodicals by 215. Only 5.6% of dailies had a circulation exceeding 50,000 and accounted for 40% of the total circulation of dailies. The bulk of the dailies (72.9%) were in the circulation range below 10,000, with their aggregate circulation forming 22% of the whole. Metropolitan cities (Delhi, Calcutta, Bombay and Madras) accounted for a little more than half (50.9%) of the total circulation of all papers. The hold of the metropolitan dailies on the mofussil shows a steady decline with the percentage of their circulation sliding down from 60% in 1962 to 58.2 and 56.6% in 1963 and 1964 respectively.

In 1964, there were 8,161 newspapers published in 44 different languages in the country, according to the ninth annual report of the Registrar of Newspapers for India.

In addition, there were 6 more less-known languages in which newspapers in the form of bilingual and multi-lingual publications were in circulation during the year.

The total circulation of 4,889 papers, which furnished the relevant data, came to 207.44 lakhs compared to 202.91 lakhs in 1963 (preliminary) as given in the last annual report.

There were 10 dailies with a circulation over one lakh each. As many as 14 periodicals circulated over one lakh each.

INDIAN NEWS AGENCIES

In 1964, 9 Indian News Agencies had 792 subscribers including 511 newspaper subscribers. The total number of correspondents and reporters employed by Indian News Agencies in 1964 for gathering news was 289. Besides, they employed 1,638 part-time correspondents and reporters in 1964.

Press Trust of India (P.T.I.), Dr. D. N. Road, Bombay-1—is an all-India news agency. It was established in 1947 and reformed in 1949. It took over the business of the Associated Press of India started by Mr. K. C. Roy and is an subsidiary of Reuter, the British-controlled international news agency.

Membership of P. T. I. is restricted to the owner or owners of newspapers regularly published in India and subscribing to any one of the news services run by the Agency. It ranks as the biggest news agency in Asia. It has over 55 teleprinter stations. Over 384 subscribers including 199 newspapers, subscribe to its service, besides radio stations and various other clients.

United News of India (UNI), Central Hall, Khan Market, New Delhi-11—UNI was founded in 1959 to provide the Indian Press with a second news agency and to fill the void left by closing down of the United Press of India. It has 46 subscribers.

News Features of India, Anand Kunj, Linking Road, Bombay-54—is run on a purely co-operative basis. It was established in 1953.

Near and Far East News (Asia)—was started on April 31, 1952.

Hindusthan Samachar, 7A, Sankar Market, New Delhi—is a multi-lingual news agency. It was started in 1948. This Samachar is responsible for putting Hindi language and Devnagri script on teleprint machines. It has 98 subscribers.

Indian News and Feature Alliance, New Delhi—was founded to syndicate specialised news and featured articles.

Indian Press Agency, IENS Bldgs., Rafi Marg, New Delhi—is essentially a special correspondent service, started in February 1957.

Eastern-India News Agency, 105, Barabazar Street, Calcutta—was started in 1960. It specialises in news from Eastern and North-Eastern India.

Associated News Service, Hyderabad—was established in 1949.

Kerala Press Service, Quilon—was established in 1956.

India News and Feature Alliance, Jivandeep Building, Parliament Street, New Delhi—A news-cum-feature agency set up in 1959 to meet the specialised needs of regional press.

FOREIGN NEWS AGENCIES

The Foreign News Agencies comprise *Reuter*, *Associated Press* (of America), *Agence France-Presse*, *Tass News Agency*, *Central News Agency*, *International News Service of the United States*, *United Press of America*, *United Press International*, *Near and Far East News (Asia) Ltd.*, *King Features Syndicate*, *National Broadcasting Company*, *Polska, Agencja Prasowa*, *Deutsche Presse Agentur* (West German National News Agency), *Telegrafjska Agencija Nova*, *Jugoslaviya*, and others. Some Foreign News Agencies supply world news to Indian papers and send Indian news to their clients abroad. In addition to these, there are also press correspondents for individual papers.

INDIAN NEWSPAPER ASSOCIATIONS

(1) *Indian and Eastern Newspaper Society, Rafi Marg, New Delhi-1*—It is a representative body of newspapers founded in February 1939. IENS is an association of newspaper publishers and proprietors. It is a central organisation primarily of the press of India and also of any other press publications in Asia, which desire to associate themselves with the Society. It also grants to advertising agencies accreditation subject to their fulfilling certain conditions. The Society's main objects are to promote and safeguard the newspaper publishing interests of its members and to take suitable steps in respect of such business as is effected by the action of legislatures, Government, law courts, municipal and local bodies, etc.

(2) *All-India Newspaper Editors' Conference* was started in 1940 at New Delhi. Their address is *Connaught Place, New Delhi*. It is a voluntary organisation of the editors of Indian newspapers and periodicals. Its main objects are to preserve the high traditions and standard of journalism, to safeguard fair comments and to secure all facilities and privileges to the press for the discharge of its responsibilities.

(3) *Indian Language Newspapers Association, Janmabhumi Bhavan, Fort, Bombay-1* (established in 1941)—Its main objects are to promote and safeguard the business interest of its members and encourage friendship and co-operation among them. Membership must be a newspaper or periodical published in an Indian language.

(4) *Indian Federation of Working Journalists, Flat No. 29, New Central Market, New Delhi*—is the federal all-India body representing journalists' trade unions. It was founded in October, 1950. The Federation's principal object is to defend the rights and interests of working journalists and to promote their status professionally.

(5) *Press Institute of India, 66, Lucknow Road, New Delhi*—has been set up by the Indian Press on 1st January, 1963 for helping to set up a professional institute to train Indian journalists to an awareness of their high responsibilities. It is affiliated to the International Press Institute, Zurich. The management is in three tiers—Board of Trustees, Board of Management and Secretariat.

(6) *Audit Bureau of Circulations Ltd. (ABC), Wakefield House, Sprott Road, Ballard Estate, Bombay-1*—The ABC was registered in 1948 as a non-profit-making company with no share capital and limited liability by guarantee. The Indian ABC is one of the sixteen audit organisations in

the world, whose certificates of newspaper circulations are accepted at their face value. To ensure the accuracy of its certificates, the ABC insists on proper maintenance of circulation records and full compliance with a comprehensive procedure of audit.

(7) *Press Guild of India, Guild Hall, Bombay-1*—a broad-based, composite organisation of journalists to enable not only members of the profession but also others connected with newspaper industry to develop close fellowship on intellectual and social plane. Founded in 1955.

INFORMATION AND PUBLICITY OF THE CENTRAL AND STATE GOVERNMENTS

The Government of India's publicity work is carried on chiefly through the Ministry of Information and Broadcasting. The Ministry is responsible for the following functions—(1) *All India Radio*, (2) *Press Information Bureau*, (3) *Directorate of Advertising and Visual Publicity*, (4) *Publications Division*, (5) *Films Division*, (6) *Research and Reference Division*, (7) *Registrar of Newspapers for India*, (8) *Five-Year Plan Publicity*, (9) *Song and Drama Division*, (10) *Directorate of Field Publicity*, (11) *Board of Film Censors*, (12) *Film Institute*.

All the States of India have their own publicity departments. They issue journals, magazines, books, etc., for publicity purposes.

There is not only Press Information Bureau under the Information Officers, or Press Attachees attached to Indian Embassies and consular establishments abroad and Public Relations Officers for Railways and other governmental agencies, but there are also Information Ministers in the States controlling information departments under the Directorate of Publicity.

Press Information Bureau—serves Indian Press and correspondents of Foreign Press stationed in India with news materials and photographs concerning the activities of the Government of India. The Bureau acts as a link between the Government and the public through the Press, informing the public about Government activities and policies and keeping the Government in touch with the main trends of public opinion as reflected in the Press. The Bureau's services are available in 13 languages. To serve newspapers in all parts of the country, the Bureau has a network of regional offices.

In addition to daily news release, the Bureau provides featured articles, background materials and reference and record materials in the form of texts of communiques, policy statements, printed reports, etc. The Bureau also arranges Press Conferences for Ministers and high officials to explain to the Press the scope and purpose of important Government decisions or policy statements. The Bureau runs a Press clipping service and Press review and analysis service in order to keep the various Ministries informed about press and public reactions to Government policies. On the pictorial side, the Bureau supplies news and featured photographs to dailies and periodicals and to foreign press. There is also a plastic ebondoid service for smaller newspapers and periodicals.

Of the Bureau's 19 regional and branch offices, 17 are linked with the headquarters at New Delhi by teleprinter lines. Information Centres have

been opened at New Delhi, Jullundhur, Srinagar, Madras, Lucknow, Patna, Hyderabad, Trivandrum, Rajkot, Bhuvanewar, Bombay, Bangalore, Nagpur, Jaipur, Bhopal, Shillong, Madurai, Ajmer and Indore.

Publications Division— is in the Ministry of Information and Broadcasting and is responsible for the preparation, production, distribution and sale of various kinds of books, pamphlets, pictorial albums and journals, which provide the general public in India and abroad with information about the country and its culture, the activities of the Central Government, Five-Year Plans, etc. This publicity is undertaken in English, Hindi and in regional languages. The Division publishes literature for National Book Trust, Central Social Welfare Board and distributes some of the publications of Sahitya Akademi, National Museum, Lalit Kala Akademi and All-India Handicrafts Board. The Division brings out 17 journals— 5 fortnightlies, 8 monthlies, 3 bi-monthlies and 1 quarterly.

A *National Bibliography Unit* was set up in Calcutta in 1957, which had brought out the first volume in 1959. The Bibliography consists of two volumes.

Directorate of Advertising and Visual Publicity— functions as the central organisation of the Government of India for the popularisation and promotion of the activities of the States among the people through advertising and visual media of mass communication. The Directorate utilises display and classified advertisements in the Press, printed publicity in the form of brochures, posters, booklets, folders, maps, charts, picture postcards, calendars, etc., exhibitions and outdoor publicity in which cinema slides, match-box labels and hoardings are used.

It has the following media—(1) Display advertisements, (2) Classified advertisements, (3) Printed publicity, (4) Outdoor publicity, (5) Exhibitions, (7) Distribution Branch.

Advertising Council of India— was founded in 1959 by the Indian and Eastern Newspaper Society, Indian Language Newspapers Association, Indian Society of Advertisers, Advertising Agencies, Association of India and Master Printers. This Council is an advisory and consultative body. It concerns with the problems of education in advertising.

Directorate of Field Publicity— The Field Publicity Organisation was established in 1953 to publicize national planning and development through its mobile units. Its activities are directed in publicizing the Plans among the people and creating the necessary enthusiasm for their successful fulfilment. Field publicity mobile units are the chief means of this kind of publicity campaign, which arrange film shows, public meetings, seminars, group discussions, etc. The Directorate carries on its activities through 14 regional offices and 86 field publicity units.

Research and Reference Division— The main function of this Division is to furnish reference materials and background notes for publicity purposes to the Ministry of Information and Broadcasting and the various media units under it. So its functions can be classified like these—(1) to undertake basic research on matters of publicity, (2) to build up an indexed reference compendium of current events, (3) to compile an Year-Book to give a comprehensive picture of the annual activities of the Central and State Governments.

Films Division— The Films Division is responsible for the production and distribution of documentary films, cartoons and newsreels for the general information and the education of the people. The Films Division has its headquarters at 91, Welkessyar Road, Bombay. The Division is divided into 4 main departments, namely, (i) *Production Department* which has Documentary Section and Newsreel Section, (ii) *Distribution Department*, (iii) *Publicity Department*, (iv) *Administration Department*.

There is also the *Central Board of Film Censors* which works as a single censoring authority for the certification of films for show in India.

The Films Division produces, on an average, one newsreel a week and about 42 documentaries a year. Newsreels are released in 13 languages : English, Hindi, Tamil, Telugu, Bengali, Marathi, Gujarati, Kannada, Malayalam, Assamese, Punjabi, Oriya and Urdu. Newsreel coverage within the country is made by 13 Films Division cameramen stationed in Bombay, Delhi, Jammu & Kashmir, Lucknow, Calcutta, Hyderabad, Madras, Bhopal, Bangalore and Ahmedabad. By arrangements with some foreign newsreel companies, facilities have been made available for the exhibition of important Indian newsreels abroad. The distribution of films is carried on by 5 branches at Bombay, Calcutta, Nagpur, Lucknow and Madras.

Photo Division— is primarily a production unit which caters for the demand for photographs by the Media Units of the Ministry as well as the Department of Tourism and the External Publicity Division. The Division also supplies photographs, under the pricing scheme, to other Ministries and Departments and also to non-publicity organisations and the public.

Registrar of Newspapers for India— The office of the Registrar of Newspapers for India was set up on July 1, 1956. The Press Registrar is the statutory authority for the collection of statistics regarding the Press in the country under the *Press and Registration of Books (Amendment) Act, 1955*. Under the Press Registrar, a central agency has been created to maintain a register of newspapers containing prescribed particulars about every newspaper in India.

The Government of India have appointed a *Press and Registration Appellate Board* under the Press & Registration of Books Act of 1867, which is empowered to hear appeals against the orders of magistrates refusing to authenticate a declaration under S. 6 or cancelling a declaration under S. 8(B) of the Act filed before them in respect of newspapers under the Press and Registration of Books Act.

FOREIGN INFORMATION SERVICES

U. N. Organisations— (1) International Bank for Reconstruction and Development, Parliament Street, New Delhi. (2) I.L.O., 3, Mandi House, New Delhi. (3) FAO, 21, Curzon Road, New Delhi. (4) U.N. Children's Fund, 11, Jor Bag, New Delhi. (5) UNESCO, 100, Sundar Nagar, New Delhi. (6) U.N. Information Centre, 21, Curzon Road, New Delhi.

U.S.A.—(1) Bhawalpur House, Sikandra Rd., New Delhi-1. (2) 7, Chowringhee Rd., Calcutta-13.

U.K.—(1) Chanakyapuri, New Delhi-11. (2) 1, Harrington Street,

Calcutta-16. (3) Mahatma Gandhi Road, Bombay. (4) 6, Armenian Road, Madras.

France— (1) 2, Aurangzeb Rd., New Delhi-11. (2) 26, Park Mansion, Park Street, Calcutta. (3) French Bank Building, Homji Street, Bombay-1. (4) 3, Commander-in-Chief Road, Madras.

Germany (West)—(1) 6/50G, Shanti Path, Chanakyapuri, New Delhi. (2) Consulate-General of West Germany, Back Bay Reclamation, Bombay. (3) Consulate-General, Ilaco House, Brabourne Road, Calcutta-1. (4) Consulate-General, 178, Netaji Bose Rd., Madras-1.

Australia— (1) Information Attache, Australian High Commission, 9/48, Sardar Patel Road, Chanakyapuri, New Delhi-11.

Japan— (1) Embassy of Japan, 50-G, Chanakyapuri, New Delhi-11. (2) 12, Pretoria Street, Calcutta-16.

Pakistan—(1) 50G, Shanti Path, Chanakyapuri, New Delhi-11. (2) 9, Circus Avenue, Calcutta-16.

ASSOCIATION OF JOURNALISTS

Number of Working Journalists in 1964 :—4,571.

*Indian Federation of Journalists, Curzon Road Barracks, New Delhi—*The first and only trade union of Indian working journalists.

Madras Reporters' Guild, Mount Road, Madras 2.

Press Guild of India, Bombay.

Southern India Journalists' Federation, Madras 2.

Foreign Correspondents' Association of India, New Delhi.

All Assam Journalists' Association, Gauhati.

All Hyderabad Working Journalists Union, Hyderabad.

Andhra Press Journalists Association, Vijayawada.

Bhopal Working Journalists Union, Bhopal.

Bihar Working Journalists Union, Patna.

Bombay Union of Journalists, Bombay.

Delhi Union of Journalists, New Delhi.

Gujarat Working Journalists Union, Ahmedabad.

Kashmir Press Club, Srinagar.

Madhya Bharat Union of Working Journalists, Indore.

M. P. Union of Working Journalists, Nagpur.

Indian Journalists Association, Burrabazar, Calcutta.

Maharashtra Union of Journalists, Poona.

Mysore State Working Journalists Association, Bangalore.

Rajasthan Working Journalists Union, Jaipur.

Saurashtra Working Journalists Association, Rajkot.

Simla Working Journalists Union, Simla.

Travancore-Cochin Working Journalists Union, Trivandrum.

U. P. Working Journalists Union, Lucknow.

Utkal Journalists Association, Cuttack.

PEPSU Working Journalists Association, Patiala.

JOURNALISM COURSES IN INDIA

University of Madras—Diploma ment of Journalism—two-year courses in journalism is conducted by the University.

College of Journalism—Bharatiya Vidya Bhavan, Chowpatty, Bombay, has three courses : (1) Journalism, (2) Advertising, (3) Printing. Each course is of two years' duration.

Punjab University, Chandigarh—maintains a University Journalism Department.

"Hindu" (Madras) scholarship of journalism—one candidate is taken each year for training.

Calcutta University, Depart-

University of Mysore : Maharaja's College, Mysore—B.A. with journalism, 3-year course.

Hilsop College, Nagpur University—Diploma and Certificate courses, each of one year's duration.

Gujarat University—A journalism course was introduced in the University, but no college has been started.

Osmania University : University College of Arts and Commerce, Hyderabad—Degree in journalism.

ADVERTISING MEDIA

(1) The main Advertising Body in India is *The Advertising Council of India*, started on August 20, 1959 as a voluntary association of publishers, advertisers, advertising agents, printers and newspaper editors. The Council promotes development of advertising on ethical, aesthetic and sound lines.

(2) *Indian Society of Advertisers, Bombay*—the Society was founded in September, 1952. As an organisation of commercial advertisers in the country, it aims to promote, maintain and uphold sound, ethical and economic principles of advertising to encourage and promote unanimity among members on all subjects involving their common good.

(3) *Society of Advertising Practitioners, Bombay*—it was incorporated under Companies Act in 1956 and as a limited liability body in May, 1958. It aims to elevate the status of advertising practitioners, to safeguard and advance their interest, etc.

INDIAN PRESS AT A GLANCE

Number of		1963	1964
Dailies	...	503	514
Tri-weeklies and Bi-weeklies	...	49	46
Weeklies	...	2,163	2,311
Others	...	5,075	5,290
Total		7,790	8,161
Non-included category papers		1,960	2,095
Total on record		9,750	10,256
Circulation ('000)			
Dailies	...	5,732	5,693
Tri-weeklies and Bi-weeklies	...	98	85
Weeklies	...	6,692	6,258
Others	...	10,974	8,708
Total		23,496	20,744

NUMBER OF NEWSPAPERS AND PERIODICALS, 1964

STATE/TERRITORY	Dailies	Tri- & bi-weeklies	Weeklies	Fort-nights	Monthlies	Annals	Total
Andhra Pradesh	28	7	124	67	199	32	460
Assam	4	2	32	10	24	11	86
Bihar	11	2	79	23	63	19	198
Gujarat	27	2	108	54	204	41	438
Kerala	42	—	68	20	221	31	386
Madhya Pradesh	52	5	127	19	59	20	283
Madras	34	2	124	123	356	81	730
Maharashtra	78	7	279	80	497	181	1,179
Mysore	45	4	129	33	151	29	392
Orissa	5	—	11	11	42	15	84
Punjab	30	1	228	61	236	33	595
Rajasthan	15	1	155	40	69	19	299
Uttar Pradesh	80	9	486	108	347	66	1,096
West Bengal	22	3	221	124	441	198	1,024
Delhi	24	—	123	66	438	171	826
Himachal Pradesh	—	—	1	1	3	2	7
Manipur	5	—	2	3	7	4	22
Tripura	2	1	7	—	—	—	10
Nagaland	—	—	—	—	1	1	2
Andaman & Nicobar Islands	1	—	—	2	—	2	5
Pondicherry	—	—	1	—	3	11	15
Goa	9	—	6	2	4	2	24
Total :	514	46	2,311	847	3,365	969	8,161

NUMBER OF NEWSPAPERS AND PERIODICALS (ACCORDING TO LANGUAGE AND PERIODICITY), 1964

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Language	Dailies	Tri- & bi-weeklies	Weeklies	Fort-nights	Monthly	Bi-monthlies, quarterlies, half-yearlies etc.	
						Annals	Total
Assamese	1	1	8	4	10	5	29
Bengali	7	4	164	68	221	91	559
English	56	6	213	135	749	486	1,708
Gujarati	34	3	114	52	235	39	482
Hindi	149	10	726	175	604	85	1,754
Kannada	36	3	98	20	92	11	261
Malayalam	35	—	46	13	149	7	252
Marathi	41	5	143	31	162	43	437
Oriya	4	—	9	10	38	9	70
Punjabi	17	—	71	7	93	5	193
Sanskrit	1	—	2	3	10	6	22
Tamil	28	—	94	103	200	10	435
Telugu	13	2	64	54	145	7	285
Urdu	68	2	334	90	261	12	772
Bilingual	12	4	153	51	253	99	578
Multilingual	—	—	30	13	74	35	162
Others	12	1	42	18	69	19	162
Total :	514	46	2,311	847	3,365	969	8,161

CIRCULATION OF NEWSPAPERS AND PERIODICALS (LANGUAGE AND PERIODICITYWISE), 1964

(In '000)

Language	Bi-monthlies, quarterlies, half-yearlies etc.							Grand Total
	Dailies	Tri- & bi-weeklies	Weeklies	Fort-nights	Monthlies	Annuals		
Assamese	7	10	65	4	29	9	—	1,24
Bengali	3,17	18	3,38	1,40	3,13	36	2	11,64
English	15,26	6	12,48	4,33	14,61	4,28	1,91	52,93
Gujarati	4,24	21	3,55	43	3,86	21	25	12,75
Hindi	7,99	18	11,95	1,47	17,21	37	—	39,17
Kannada	1,90	5	1,93	23	1,55	8	1	5,75
Malayalam	6,26	—	4,99	6	3,29	5	3	14,68
Marathi	5,52	2	3,15	32	3,63	39	52	13,55
Oriya	58	—	18	7	56	2	—	1,41
Punjabi	40	—	82	6	1,35	2	—	2,65
Sanskrit	1	—	—	2	11	2	—	16
Tamil	6,69	—	10,36	1,34	5,23	6	—	23,68
Telugu	1,54	—	3,04	37	2,71	2	—	7,68
Urdu	2,91	4	3,17	54	4,22	5	—	10,93
Bilingual	12	1	1,63	28	3,04	59	1	5,68
Multilingual	—	—	53	7	77	18	7	1,62
Others	27	—	77	12	57	17	2	1,92
Total	56,93	85	62,58	11,15	66,13	6,96	2,84	2,07,44

CIRCULATION OF NEWSPAPERS AND PERIODICALS, 1964

STATE/UNION TERRITORY	Dailies		Tri- & bi-weeklies		Weeklies		Others		Total	
	Number of papers	Circula- tion ('000)	Number of papers	Circula- tion ('000)	Number of papers	Circula- tion ('000)	Number of papers	Circula- tion ('000)	Number of papers	Circula- tion ('000)
Andhra Pradesh	16	1,96	—	—	65	1,55	169	2,37	249	5,88
Assam	2	22	2	12	21	98	23	41	48	1,73
Bihar	8	1,40	2	8	44	1,42	51	1,33	105	4,23
Gujarat	22	2,99	2	5	65	2,50	189	3,56	278	9,10
Kerala	24	6,34	—	—	34	5,32	169	5,36	227	17,02
Madhya Pradesh	36	1,52	2	3	56	98	66	69	160	3,22
Madras	28	9,99	2	2	57	14,50	341	13,91	428	38,42
Maharashtra	62	11,77	3	19	184	13,58	524	17,65	773	43,19
Mysore	33	2,62	3	5	67	2,88	131	2,18	234	7,73
Nagaland	—	—	—	—	—	—	2	1	2	1
Orissa	4	62	—	—	7	18	33	49	44	1,29
Punjab	17	1,43	—	—	115	1,59	200	2,95	332	5,97
Rajasthan	8	22	1	1	75	1,70	66	1,02	150	2,95
Uttar Pradesh	56	3,06	8	15	234	5,63	330	8,71	678	17,56
West Bengal	17	6,61	3	15	131	5,87	438	10,24	599	22,87
Delhi	21	5,83	—	—	67	3,72	457	15,95	545	25,50
Goa	8	28	—	—	2	7	3	3	13	38
Himachal Pradesh	—	—	—	—	1	—	3	4	4	4
Manipur	4	5	—	—	2	1	4	3	10	9
Pondicherry	—	—	—	—	1	—	12	15	13	15
Tripura	1	2	1	—	5	9	—	—	7	11
Total	367	56,93	29	85	1,283	62,57	3,210	87,08	4,889	2,07,44

NUMBER OF PAPERS IN INDIA

1957	...	...	5,932	1961	...	...	6,623
1958	...	...	6,918	1962	...	...	7,397
1959	...	...	6,096	1963	...	...	7,790
1960	...	...	6,435	1964	...	...	8,161

NUMBER OF PAPERS IN STATES, 1964

Maharashtra	...	1,179	Mysore	...	392	Manipur	...	23
Uttar Pradesh	...	1,096	Kerala	...	386	Pondicherry	...	15
West Bengal	...	1,024	Rajasthan	...	299	Tripura	...	10
Delhi	...	826	Madhya Pradesh	...	283	Himachal Pradesh	...	7
Madras	...	730	Bihar	...	198	Andaman & Nico-	...	5
Punjab	...	595	Assam	...	86	bar Islands	...	2
Andhra Pradesh	...	460	Orissa	...	84	Nagaland	...	
Gujarat	...	438	Goa	...	24			
Total							...	8,161

CIRCULATION OF PERIODICALS, 1964
(According to Periodicity)

Periodicity	Number of newspapers		Circulation ^a (‘000)
Weeklies	...	2,311	62,58
Fortnightlies	...	847	11,15
Monthlies	...	3,365	66,13
Bi-monthlies, quarterlies and half-yearlies	...	969	6,95
Annuals	...	109	2,85
Total	...	7,601	1,49,66

LEADING PERIODICALS, 1964
(Language-wise)

English		Indian Farming (Monthly), Delhi	
Blitz (Weekly), Bombay	2,00,505		50,792
Hindu Survey of Indian Industry (Annual), Madras	1,41,339		
Filmfare (Fortnightly), Bombay	1,26,341		
Readers Digest (Monthly), Bombay	1,21,962		
Illustrated Weekly of India, Bombay	96,590		
Screen (Weekly), Bombay	65,046		
Hindi		Kalyan (Monthly), Gorakhpur	
			1,33,756
		Dharma Yug (Weekly), Bombay	1,01,915
		Saptahik Hindustan, Delhi	64,274
		Sushama (Monthly), Delhi	62,750
		Parag (Monthly), Bombay	56,418
		Blitz (Weekly), Bombay	54,029

* Figures relate to the number of papers for which circulation data were available.

Bengali

Betar Jagat (Fortnightly), Calcutta ...	65,231
Desh (Weekly), Calcutta ...	55,624

Gujarati

Janambhoomi Prabasi (Weekly), Bombay ...	50,979
Akhand Anand (Monthly), Ahmedabad ...	41,920
Zagmag (Weekly), Ahme- dabad ...	29,049
Chitralok (Weekly), Ahme- dabad ...	22,551
Stree (Weekly), Ahmedabad	21,024
Bombay Samachar (Annual), Bombay ...	19,896

Malayalam

Malayala Manorama (Weekly), Kottayam ...	2,01,424
Mathrubhumi (Weekly), Kozhikode ...	98,686
Janayugam (Weekly), Quilon	31,023
Filmnandam (Weekly), Ernakulam ...	30,453
Sarasan (Monthly), Changa- nachery ...	23,333
Kerala Sabdam (Weekly), Quilon ...	20,460

Tamil

Kumudam (Weekly), Madras ...	3,05,146
Ananda Vikatan (Weekly), Madras ...	1,68,115
Varantari Rani (Weekly), Madras ...	1,31,464
Kalkandu (Weekly), Madras ...	1,17,791
Kalki (Weekly), Madras ...	1,09,248
Pesum Padam (Monthly), Madras ...	67,427

Telugu

Andhra Prabha Illus- trated Weekly, Madras	1,33,665
Andhra Sachitra Vara Patrika (Weekly), Madras ...	90,127
Chandamama (Monthly), Madras ...	41,876
Panchayat (Monthly), Hyderabad ...	19,003
Bala Mitra (Monthly), Madras ...	17,875
Yuva (Monthly), Hydera- bad ...	15,654

Marathi

Chandoba (Monthly) Madras ...	51,813
Swaraj (Weekly), Poona ...	47,329
Loka Rajya (Weekly), Bom- bay ...	27,890
Kirloskar (Monthly), Poona	22,303
Amrit (Monthly), Nasik ...	21,429
Awaz (Annual), Bombay ...	20,100

Kannada

Prajamata (Weekly), Ban- galore ...	33,210
Chandamama (Monthly), Madras ...	30,509
Prapancha (Weekly), Hubli	29,420
Kasturi (Monthly), Hubli	27,071

Urdu

Shama (Monthly), Delhi ...	1,20,583
Biswin Sadi (Monthly), Delhi	20,000

Punjabi

Preet Lari (Monthly), Amritsar ...	11,072
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Oriya

Utkal Prasanga (Monthly), Bhubaneswar ...	20,000
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Assamese

Assam Bani (Weekly), Gauhatt ...	34,978
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LEADING BENGALI PERIODICALS

Weeklies, Calcutta				Fortnightlies, Calcutta			
Desh	...	...	55,624	Betar Jagat	...	...	65,231
Screen	...	...	18,375				
Amrita	...	...	17,626	Monthlies, Calcutta			
Basumati	...	...	20,821	Suktara	...	...	28,000

NUMBER AND CIRCULATION OF PERIODICALS, 1963 & 1964

LANGUAGE	(Languagewise)		Circulation ('000)	
	Number of papers			
	1963	1964	1963	1964
English	...	1,540	42,85	37,61
Hindi	...	1,497	35,18	31,00
Tamil	...	420	21,86	16,99
Malayalam	...	211	9,88	8,42
Gujarati	...	419	10,60	8,30
Bengali	...	539	9,95	8,29
Marathi	...	399	9,71	8,01
Urdu	...	642	10,70	7,98
Telugu	...	264	7,49	6,14
Kannada	...	212	4,33	3,80
Punjabi	...	145	2,36	2,25
Assamese	...	22	74	1,07
Oriya	...	73	1,00	83
Sanskrit	...	17	14	15
Bilingual	...	532	6,37	5,55
Multilingual	...	163	1,74	1,62
Others	...	143	1,76	1,65
Total	...	7,238	1,76,66	1,49,66

NUMBER AND CIRCULATION OF PERIODICALS, 1964

STATE/TERRITORY	(Statewise)		Number	Circulation ('000)
Maharashtra	...	...	1,094	31,23
Madras	...	...	694	28,41
Delhi	...	...	802	19,67
West Bengal	...	...	999	16,11
Uttar Pradesh	...	...	1,007	14,35
Kerala	...	...	344	10,68
Gujarat	...	...	409	6,06
Mysore	...	...	343	5,06
Punjab	...	...	564	4,54
Andhra Pradesh	...	...	425	3,92
Bihar	...	...	185	2,75

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STATE/TERRITORY

STATE/TERRITORY	Circulation
Rajasthan	283
Madhya Pradesh	226
Assam	80
Orissa	79
Pondicherry	15
Goa	15
Tripura	7
Himachal Pradesh	7
Manipur	17
Nagaland	2
Andaman and Nicobar Islands	4

LEADING DAILY NEWSPAPERS, 1964

(Language-wise)

Circulation

English	Circulation	Gujarati	Circulation
Amrita Bazar Patrika, Cal.	1,04,464	Bombay Samachar, Bom.	59,137
Deccan Herald, Bangalore	41,209	Gujarat Samachar, Ahmedabad	50,841
Free Press Journal, Bombay	84,188	Jai Hind, Rajkot	34,594
Hindu, Madras	1,41,708	Janasatta, Ahmedabad	46,462
Hindustan Standard, Cal.	50,306	Janmabhoomi, Bombay	25,083
Hindustan Times, Delhi	1,13,557	Sandesh, Ahmedabad	50,300
Indian Express, Bombay	93,816		
Indian Nation, Poona	33,257	Kannada	
Statesman, Calcutta	1,11,880	Navabharat, Mangalore	21,033
Statesman, Delhi	26,970	Prajavani, Bangalore	60,591
Times of India, Bombay	1,39,977	Samyukta Karnataka, Hubli	33,824
Times of India, Delhi	47,333	Samyukta Karnataka, Bangalore	17,802
		Vishvavani, Hubli	15,678
Hindi		Malayalam	
Arya Varta, Patna	49,848	Deshabhimani, Calicut	24,853
Hindustan, Delhi	87,764	Deepika, Kottayam	23,047
Nav Bharat Times, Bom.	43,219	Kerala Kaumudi, Trivandrum	82,175
Nav Bharat Times, Delhi	99,464	Malayala Manorama, Kottayam	1,52,056
Vir Arjun, Delhi	24,403	Mathrubhumi, Calicut	92,863
Vishwa Mitra, Calcutta	38,681	Mathrubhumi, Ernakulam	76,710
Assamese		Marathi	
Natun Assamiya, Gauhati	6,841	Kesari, Poona	35,244
Bengali		Lokasatta, Bombay	1,29,142
Ananda Bazar Patrika, Cal.	1,61,809		
Basumati, Calcutta	45,652		
Jugantar, Calcutta	1,31,004		
Lok Sevak, Calcutta	13,360		

Maharashtra Times,		Thanthi, Madras	... 1,08,395
Bombay	... 60,979	Thanthi, Madurai	... 48,477
Maratha Dainik, Bombay	62,371	Thanthi, Tiruchirapalli	41,062
Navashakti, Bombay	... 31,834		
Sakal, Poona	... 72,843	Telugu	
Oriya		Andhra Jyothi, Vijayawada	18,509
Prajananta, Cuttack	... 16,055	Andhra Patrika, Madras	... 46,295
Samaj, Cuttack	... 29,153	Andhra Prabha, Vijayawada	62,854
		Andhra Prabha, Madras	... 14,030
Punjabi		Urdu	
Prakash, Chandigarh	... 8,110	Inquilab, Bombay	... 11,020
Tamil		Milap, Jullundur	... 10,515
Dinamani, Madurai	... 90,368	Milap, Delhi	... 25,489
Dinamani, Madras	... 45,988	Pratap, Delhi	... 30,905
Swadesamitran, Madras	... 45,476	Pratap, Jullundur	... 14,570
		Pradeep, Jullundur	... 11,296

LEADING DAILIES, 1964 (Circulation over 1,00,000)

			<i>Circulation</i>
Ananda Bazar Patrika, Calcutta (Bengali)	...	...	1,61,809
Malayala Manorama, Kottayam (Malayalam)	...	...	1,52,056
Hindu, Madras (English)	...	...	1,41,708
Times of India, Bombay (English)	...	...	1,39,997
Jugantar, Calcutta (Bengali)	...	...	1,31,004
Lokasatta, Bombay (Marathi)	...	...	1,29,142
Hindustan Times, Delhi (English)	...	...	1,13,557
Statesman, Calcutta (English)	...	...	1,11,880
Thanthi, Madras (Tamil)	...	...	1,08,395
Amrita Bazar Patrika, Calcutta (English)	...	...	1,04,464

LEADING PERIODICALS, 1964 (Circulation over 1,00,000)

			<i>Circulation</i>
Kumudam (Tamil), Madras	...	...	3,05,146
Malayala Manorama (Malayalam), Kottayam	...	...	2,01,424
Blitz News Magazine (English), Bombay	...	...	2,00,505
Ananda Vikatan (Tamil), Madras	...	...	1,68,115
Hindu Survey of Indian Industry (English annual), Madras	...	...	1,41,339
Kalyan (Hindi monthly), Gorakhpur	...	...	1,33,756
Andhra Prabha Illustrated Weekly (Telugu), Madras	...	...	1,33,665
Vaarrantari Rani (Tamil), Madras	...	...	1,31,464
Filmfare (English fortnightly), Bombay	...	...	1,26,341
Reader's Digest (English monthly), Bombay	...	...	1,21,962

TRANSPORT			
Shama (Urdu monthly), Delhi	...	...	1,20,585
Kalkandu (Tamil), Madras	...	...	1,17,791
Kalki (Tamil), Madras	...	...	1,09,248
Dharmayug (Hindi), Bombay	...	...	1,01,915

TRANSPORT

ADMINISTRATIVE SET-UP— The Ministry of Transport continues to be responsible for the administration of the following subjects—Co-ordination of different means of transport, including Railways; Road Transport; Major and Minor Ports, Shipping and Shipyards; Lighthouses and Lightships; Shipbuilding (Public Sector); Inland Water Transport; Road Development including National Highways; Central Road Fund; Tourism; compulsory insurance of Motor Vehicles, etc.

For the sake of administrative convenience, the Ministry of Transport functions as the *Transport Wing*, the *Roads Wing* and the *Department of Tourism*. *Transport Wing* deals with all the subjects excepting 'Roads' and 'Tourism'. *Roads Wing* deals with Road Development including National Highways, roads in Union Territories and the Central Road Fund. The *Department of Tourism* is vested with the responsibility of development and promotion of foreign as well as home tourism and the administration of tourist offices in India and abroad. A separate organisation in the Ministry, *Border Roads Development Board*, deals with problems of road development in border areas.

Transport Research— Apart from the usual duties of advising the Ministry on various economic and statistical matters, the *Directorate of Transport Research* has taken up a programme of studies to work out the economic implications of investment projects relating to roads, bridges, road transport, ports, etc.

ROADS

ROAD PROBLEM— The importance of roads and the facilities of transportation in a vast country like India can scarcely be exaggerated. Well-kept and well-constructed roads are essential for a country's progress. The roads have also a vital role to play in the defence of India. The effectiveness of defence depends on the ability of our armed forces to concentrate at any threatened point within the shortest possible time. India's deficiency in the matter of roads has contributed very largely to her agricultural, commercial and industrial backwardness today. The most serious defect is the lack of proper and adequate road communication between villages and markets. Another aspect of inadequacy of our road system is that it is unbalanced. The trunk roads are, for example, relatively more highly developed than the district and village roads. Most of the rural roads are fair-weather roads. When monsoon arrives, they are turned into mud and pools of dirty water and are rendered unusable.

SHORT HISTORY OF ROAD PROGRESS—The present road system is a superstructure raised on the old Mughal and other roads. The development began more than one hundred years ago. But the Government's entire energy being directed towards the opening of railways, roads were regarded as of local importance, a fit subject for devolution. The culmination of the lack of interest was reached in the Government of India Act of 1919 which transferred the subject to the provinces. The Central Government ceased to concern itself with road development except the roads of military importance and certain arterial roads in Indian States.

But the circumstances changed after the World War I. Motor transport began to come in the forefront and became a common feature on the principal roads throughout the country. The result was that the road expansion could not keep pace with the increase of motor traffic and the existing roads began to deteriorate. A resolution was carried in the Council of State in 1927 for the improvement of the road system with the result that a committee of both the chambers of the Central Legislature was set up under the chairmanship of Dr. M. R. Jayakar, to investigate and report. The *Jayakar Committee* in 1928 reported that road development was passing beyond the capacity of Provincial Governments and local bodies, that it was becoming a matter of national importance, and it might be a proper charge of Central revenues. The Committee recommended that the Central should assist co-ordinated development by making annual block grants to provinces from out of a Central Road Fund built up by a petrol-tax surcharge of two annas per gallon. The Jayakar Committee also recommended the setting up of (i) separate Road Development Committee of the Central Government, (ii) a Transport Advisory Committee consisting of the representatives from the Central Government and the Provinces, (iii) a Central Organisation for Information and Research. A *Central Road Organisation* was set up in 1930 and a *Transport Advisory Council* in 1935.

ROAD ADMINISTRATION—Road development is shared by the Centre and the States, the former being responsible for the National Highways and certain selected roads of strategic or other importance and the States for their own State and village roads. A *Central Road Fund* was created in 1929 from the proceeds of a surcharge on petrol tax. Out of this fund, block grants were made to the Provinces for road-building. In 1947, the Central Government assumed the responsibility of the *National Highways*. Under the Constitution, National Highways have become Central subjects; while other roads, namely, State highways and district and village roads, are the responsibility of the State Governments.

The Ministry of Transport (*Roads Wing*) is responsible for the construction, development, maintenance and repairs of roads other than National Highways in the Union Territories, Nagaland and certain roads in Sikkim under the charge of the Central Public Works Department.

CENTRAL ROAD FUND—The creation of *Central Road Fund* in 1929 on the recommendation of Jayakar Committee, constitutes a milestone in the history of road transport in India. This non-lapsing Fund derives its revenue from the levy of an additional duty of customs and

excise on non-aviation motor spirit @ 2½ annas a gallon. Money from the Central Road Fund is provided to States by way of allocations and grants-in-aid. 80 p.c. of the annual revenue of the Fund is provided to States by way of allocations on the basis of the actual quantity of motor spirit consumed in each State. The balance 20 per cent is credited to the Central Reserve of the Fund. This Reserve is applied to defray the cost of administering the Fund and thereafter upon such schemes of research and intelligence, special enquiries and special grants-in-aid for such projects connected with roads as the Central Government may approve.

The total amount distributed to the States from the inception of the Fund upto 30th June, 1964 works out to Rs. 67.76 crores.

Allocation Account

Central Road Fund and expenditure upto the end of 1964-65.
(Figures in lakhs of rupees)

State	Total of Schemes approved upto 15-11-64	Total covering allocations in respect of the revenue upto 30-9-62	Expenditure incurred upto 30-6-64
Andhra Pradesh	271.83	194.82	248.47*
Assam	439.94	307.60	329.18
Bihar	434.35	248.96	253.86
Gujarat	554.73	512.03	589.22
Kerala	350.99	208.50	232.10*
Madhya Pradesh	309.22	203.55	172.00
Madras	649.10	590.16	588.88
Maharashtra	1010.87	770.59	786.24
Mysore	446.40	306.18	198.54
Orissa	138.87	74.92	63.90*
Punjab	526.81	367.02	391.42
Rajasthan	238.99	110.79	134.87
Uttar Pradesh	703.39	421.34	547.51*
West Bengal	1307.57	785.99	798.22*
Territories			
Andaman & Nicobar Islands	3.18	1.50	Not known
Delhi	231.24	153.31	138.82†
Himachal Pradesh	1.96	3.91	0.82
Jammu & Kashmir	34.83	18.08	22.24
Manipur	10.01	6.81	7.36
Tripura	9.19	4.23	3.05
Total	7673.47	5290.29	5506.70

* Expenditure upto March, 1964.

† Expenditure upto March, 1963.

Reserve Account

Grants from Central Road Fund (Ordinary) Reserve and expenditure incurred upto end of 1964-65.
(Figures in lakhs of rupees)

State	Total grants sanctioned upto 15-11-64			Expenditure upto 31-3-64
Andhra Pradesh	...	...	73.67	20.51
Assam	...	...	120.86	119.31
Bihar	...	...	38.60	18.35
Gujarat	...	...	30.90	30.82
Kerala	...	...	36.65	25.38*
Madhya Pradesh	...	...	41.71	62.17
Madras	...	...	80.66	89.57
Maharashtra	...	...	125.32	100.74
Mysore	...	...	35.39	37.74
Orissa	...	...	82.71	66.18
Punjab	...	...	65.96	52.52
Rajasthan	...	...	78.63	50.36
Uttar Pradesh	...	...	132.90	91.56
West Bengal	...	...	103.26	75.14
Territories				
Andaman and Nicobar Islands	...	...	4.02	Not known
Delhi	...	...	46.51	25.15*
Himachal Pradesh	...	...	40.66	32.85
Jammu & Kashmir	...	...	15.70	14.83
Manipur	...	...	5.96	1.69
Tripura	...	...	2.41	0.06
TOTAL			1181.85	885.56

NAGPUR PLAN— The Nagpur Plan, prepared in 1943, laid down a target of 331,000 miles of roads, made of 123,000 miles of surfaced roads and 208,000 miles of unsurfaced roads for serving the needs of the country during the following twenty years. The broad objective of the Plan was that no village in a well-developed agricultural area should be more than five miles from a main road and in an undeveloped area, twenty miles from a main road.

The Nagpur Plan classified roads under the following heads—*National Highways, Provincial or State Highways, Major District Roads, Minor District Roads and Village Roads*. The National Highways connect capitals, ports and highways and constitute the main arteries of communication in the country. They include roads of strategic importance. The State High-

* Expenditure upto March, 1963.

TRANSPORT

ways are the main trunk roads of a State. *District Roads* connect areas of production and markets with either a highway or a railway. They also form the main links between headquarters of neighbouring districts. *Minor District Roads* and *Village Roads* mostly meet the requirements of rural population; they connect villages and groups of villages with one another and with the nearest district road or river ghat.

PROGRESS OF ROAD DEVELOPMENT— Looking back over the plans since independence, the record of road development in our country is one of consistent progress. The following table shows the progress—

	1947	1951	1956	1961
Surfaced roads (in miles) ...	90,630	97,567	1,13,725	1,46,513
Unsurfaced roads (in miles) ...	1,50,602	1,50,945	1,95,931	2,94,113
Total ...	2,41,232	2,48,512	3,09,656	4,40,626

By the end of December, 1964, nearly 18,800 miles or about 75% of the original target of 25,000 miles of surfaced roads in the Third Five-Year Plan are estimated to have been constructed. Of the unsurfaced roads, the net addition has been about 70,000 miles from 1.4.61 to 31.12.64.

NATIONAL HIGHWAYS— The Central Government under the National Highways Act, 1956 took the responsibility for the construction and maintenance of certain roads suitable for inclusion in the system of National Highways. State highways and district and village roads are the responsibility of the State Governments. Roads of a total length of 14,925 miles are included in the present National Highways System.

Mileage of National Highways

STATES	Miles	STATES	Miles
Andhra Pradesh ...	1,412	Orissa ...	852
Assam ...	837	Nagaland ...	69
Bihar ...	1,167	Punjab ...	784
Gujarat ...	676	Rajasthan ...	782
Jammu & Kashmir ...	338	Uttar Pradesh ...	1,455
Kerala ...	260	West Bengal ...	894
Madhya Pradesh ...	1,669	TERRITORIES	
Madras ...	1,050	Delhi ...	45
Maharashtra ...	1,487	Himachal Pradesh ...	200
Mysore ...	816	Manipur ...	132

ROADS OTHER THAN NATIONAL HIGHWAYS— The Government of India also aid the development of certain arterial roads in the States. These include, *inter alia*, the Passi-Badarpur Road in Assam and the West Coast Road in Maharashtra, Mysore, and Kerala. Nearly 415 miles of roads were constructed or improved from April, 1956 to the end of December, 1961.

Under a special programme in May, 1954, for the development of certain selected State roads of inter-State or of economic importance, about 925 miles of new roads were constructed and 1,975 miles of existing roads improved.

BORDER ROADS DEVELOPMENT BOARD— This Board was formed in March, 1960 to accelerate the economic development of North and North-Eastern border areas by making these areas accessible through the development of arterial routes. It involved construction of 5,400 miles of new and 2,460 miles of existing roads. This includes an immediate target of construction of 3,389 miles of new roads and improvement of 2,405 miles of existing roads.

The important roads which are now available for regular traffic, are (i) Hindustan-Tibet Road upto 176 miles from Simla; (ii) road to Bomdi La in NEFA and (iii) a main road in the eastern Bhutan.

I WENTY-YEAR PLAN— A new long-term plan for road development, under consideration, aims at bringing every village (a) in a developed and agricultural area within 4 miles of a metalled road and 1.5 miles of any road, (b) in a semi-developed area within 8 miles of a metalled road and 3 miles of any road, and (c) in an undeveloped and uncultivable area within 12 miles of a metalled road and 5 miles of any road. These targets, when achieved, will provide an average of 52 miles of road per 100 sq. miles of area as against about 36 miles at present.

INDIAN ROADS CONGRESS— The Central Government took steps for the creation of a semi-official body known as *Indian Roads Congress* in 1934. The membership is open to qualified engineers dealing with roads. The Roads Congress is designed to provide a forum for the regular pooling of experience and ideas on all matters of roads, to recommend standard specifications, and to provide a platform for the expression of professional opinion on road engineering.

The most important contribution of the Roads Congress to the science of road engineering in India, is the "standard specifications and Code of Practice for Road Bridges in India", which has been accorded general acceptance throughout India.

STANDARDS, ROAD RESEARCH AND TECHNICAL ACTIVITIES— The Central Designs Office of the Roads Wing deals with type designs for route-making for the National Highways and for furlong and boundary stones, principles to be followed in the erection of advertisement boards on road-sides, form of recording data on bridges, security of designs for bridges, production of road-rollers, manufacture of road-making machinery, etc.

The *Central Road Research Institute* was started at Okhla in Delhi on July 16, 1952 for the research on road engineering. Technical advice is also given to the State Governments on various problems concerning road works such as traffic surveys, road economy studies, road geometries, design of junctions, citing of motor-fuel filling stations, etc. It seeks to provide cheap and durable roads to suit growing transportation needs of a rapidly expanding economy.

ROAD TRANSPORT

ADMINISTRATION OF ROAD TRANSPORT— Passenger transport has been nationalised in varying degrees in the States and Union Territories. In many of them statutory corporations have been set up for providing the service. Goods transport continues to be in the private sector. In Assam and North Bengal area, however, a road transport organisation has been set up under Government auspices for essential services.

An *Inter-State Transport Commission* has been set up for the development, co-ordination and regulation of road transport services on inter-State routes. This Commission has succeeded in bringing about inter-State reciprocal agreements practically all over the country except Kerala and Madras.

To ensure proper co-ordination between the different modes of transport on one hand and the Central and State policies on the other, the Government of India have set up the *Transport Development Council*, *Road and Inland Water Transport Advisory Committee* and *Central Transport Co-ordination Committee*. An Association of State Road Transport Undertakings was set up in 1963 to co-ordinate the activities of the undertaking and to secure procedural uniformity, high standards of service and economic operations.

SOME ORGANISATIONS— The *Road and Inland Water Transport Advisory Committee* was reconstituted in 1963-64. A *Directorate of Transport Research* has been organised in the Department of Transport as a distinct unit to analyse and interpret the economic implications of the current and future development programmes. A *Study Group* composed of officials and non-officials has been constituted to consider the problems relating to the organisation and promotion of transport co-operatives and for formulating concrete programmes for the Third Five-Year Plan. A *Central Road Transport Organisation* was set up in November, 1962, with headquarters at Siliguri, to fill the void created by the strike of the crew of the Rivers Steam and Navigation Company and to meet the emergency created by the Chinese invasion. Its present fleet strength is 90 trucks.

MOTOR VEHICLES IN INDIA

		Number			Number
1947	...	2,11,949	1960	...	5,98,384
1951	...	3,06,313	1961	...	6,75,221
1957	...	4,47,229	1962	...	7,10,822

The vehicles at the end of March, 1962 comprised 1,07,584 motor cycles and auto-rickshaws, 3,04,618 jeeps and private cars, 59,089 public service vehicles, 24,191 motor cars, 177,418 goods vehicles and 37,922 miscellaneous vehicles.

ROPEWAYS— Ropeways are used in India in areas of hilly and broken countries where valleys and streams abound and gradients are steep and where other forms of communication are primitive or non-existent. These conditions obtain in the foothills of the Himalayas and

in some parts of South India. In India, the use of ropeways is confined to the movement of materials and merchandise. The following are the main ropeways operating in India at present—(1) *Darjeeling-Bijanbari monocable ropeway*, 5 miles long with one span of 6,000 ft. (2) *Mono-cable ropeway* at Kalimpong, which climbs 3,400 ft. in its length. Both these ropeways are regarded as extensions to the railway system. (3) *Cherrachatak ropeways* at Cherrapunji in Assam. (4) *Annamalai ropeway* in South India serves tea and coffee on the 5,000-foot high plateau.

Apart from these several purposes, public or semi-public applications, Ropeway Transport is extensively used in the tea-planting districts. It is also found in coal-mining areas, mainly in Bihar and W. Bengal, where it provides a particularly economical method of transporting waste to spoil dumps. It is used in the manufacture of cement and in the working of quarries, mines, sand, gravel and clay pits. Ropeways are used elsewhere in civil engineering for large constructions, such as masonry dams and bridges. There are approximately 100 ropeways operating in India today.

INLAND WATERWAYS

POSITION OF INLAND WATERWAYS—From ancient times, the trade and commerce of northern India has been facilitated by the abundance of navigable rivers.

Inland Water Transport played an important role in India's transport system till the middle of the 19th century. With the development of railways and roads and the withdrawal of large volumes of water for irrigation in the upper reaches of the rivers, its importance declined. However, in certain parts of India, e.g., U.P., Bihar, West Bengal, Assam, and Kerala, it is recognised as an important means of transport, and on the East and West Coasts there are several stretches of canals where inland water transport plays an important role. There are at present over 5,000 miles of navigable waterways, of which the important ones are the Ganga and the Brahmaputra and their tributaries, the Godavari and the Krishna and their canals, the backwaters and canals in Kerala, the Buckingham Canal in the Madras and Andhra States, the West Coast canals and the Mahanadi canals in Orissa.

At present, 1,557 miles of rivers are navigable by mechanically-propelled vessels and 3,587 miles by large country boats. The subject "shipping and navigation on inland waterways as regards mechanically-propelled vessels" is included in List III of the Seventh Schedule of the Constitution and the Central Government have power for concurrent legislation in this respect. Shipping and navigation on National Waterways declared as such by law by Parliament are the concern of the Central Government.

A *Directorate of Inland Water Transport* has been set up in the Ministry of Transport to advise the Central and State Governments on the development of Inland Water Transport in the country.

GANGA-BRAHMAPUTRA WATER TRANSPORT BOARD—The need for developing inland waterways has now been realised. A beginning was made with the constitution of the *Ganga-Brahmaputra Water*

Transport Board in 1952 by the Government of India. For ensuring the co-ordinated development of Inland Water Transport in North-East India, an Inter-State Corporation is necessary; so the Board was set up by agreement between the Central Government and the Governments of U.P., Bihar, West Bengal, and Assam. The Board's funds are derived from annual recurring contributions made by the participant Governments, supplemented by *ad-hoc* grant for capital project made by the Central Government from time to time.

The works of the Ganga-Brahmaputra Board consist of—(1) dredging of important waterways; (2) provisions for aids to navigation, such as radio-telephone and automatic beacons; (3) development of inland port facilities at selected places. The Plan also provides for the development of the Buckingham Canal and the West Coast canals.

The following form parts of the equipment by G. B. W. T. Board—(1) Pusher Tugs, (2) Small Tugs, (3) Sundry Launches, (4) Barges, (5) 12 in. Cutter Suction Dredger.

CIVIL AVIATION

HISTORY OF CIVIL AVIATION— Human flight began in India by balloon, when Mr. Joseph Lynn took off from Lalbagh Gardens, Bombay, in 1877 and rose to a height of 7,500 feet. By 1911, however, army officers were able to make demonstration flights in a "power-driven" aeroplane. In the same year, the world's first "air mail" was flown from Allahabad to Naini Junction—a distance of 6 miles, by a French pilot, M. Picquet. Lord Lloyd, the then Governor of Bombay, organised the first regular air-mail service in 1920.

The plans of Imperial Airways for a service between England and India in 1920 gave Indian civil aviation a powerful stimulus. A Department of Civil Aviation was established in 1927, to regulate international and internal services; aerodromes were constructed and flying clubs started. With the first scheduled flights between London and Karachi in 1929, India joined other countries on the new air maps of the world.

From 1930 to the end of World War II in 1945, Indian civil aviation expanded until the farther corners of the sub-continent were linked by air. Foremost in this growth were Tata Airlines Ltd. and Indian National Airways, followed by many other private companies. The war also brought about tremendous advances in air travel.

From 1945, passenger and freight traffic steadily increased, and 11 companies were licensed to co-operate. But costs also rose steeply, and it became clear that the industry would be unable to mobilise adequate resources for development. Taking all these into account, a committee of enquiry was appointed by the Government in 1950, for putting the Indian civil aviation on a stable basis. The Committee reported that (1) the number of companies should be reduced to 4, (2) the number of aircraft and superfluous staff should be reduced and rates and fares increased.

ed and fixed at an economical level, (3) the Government should give financial assistance to companies in the form of rebate on aviation fuel and (4) non-scheduled operations should be allowed if they do not enter into competition with regular airlines.

The financial position of the companies, however, continued to deteriorate. So, the Government came to the conclusion that all the units of operation should be owned by the State. The result was the passing of the *Air Corporation Act, 1953* which came into force on the 28th May, 1953. This nationalised civil aviation in India provided for the setting up of 2 Corporations, one for foreign travel and another for domestic services and services to neighbouring countries. These two Corporations took over the administration of all existing companies.

The main provisions of the *Air Corporation Act* are : (1) An *Air Transport Council* is to be established to tender advice on matters of public importance, (2) An *Advisory Committee* for each Corporation is to be established for the purpose of maintaining liaison with the public, (3) There will be a *Labour Relations Committee* for each Corporation, (4) Finally each Corporation is to act so far as may be on business principles.

The two Corporations, viz., *Indian Airlines Corporation* and *Air-India International*, came into existence on 15th June, 1953. Each Corporation consists of 9 members including a Chairman, all being appointed by the Central Government.

Under the *Air Corporation Act, 1953*, an *Air Transport Council* was also established in 1955, to advise the Government on matters affecting the two Corporations.

The *Indian Airlines Corporation* consists of 12 Viscounts, 3 Skymasters, 10 Fokker Friendships, 38 Dakotas and 3 Caravelli Jets. It also provides services to the neighbouring countries, viz., Pakistan, Burma, Ceylon, Afghanistan, and Nepal.

Air-India International has 9 Super-Constellations, 8 Boeing-707 Jets and one DC-3 Freighter. It provides services to 21 countries. It made a profit of Rs. 3.62 crores in 1964-65.

ADMINISTRATIVE SET-UP—Consequent upon the reorganisation of the Ministry of Transport in June, 1964, the Ministry of Civil Aviation was formed under the charge of a separate Minister. The new Ministry are responsible for the administration of the following subjects, which were previously dealt with by the Ministry of Transport :—(i) Meteorological organisation ; (ii) Aircraft and air navigation, provision of aerodromes regulation and organisation of air traffic and of aerodromes (excepting sanitary control of air navigation) ; (iii) Beacons and other provisions for the safety of aircraft ; (iv) Carriage of passengers and goods by air ; (v) Corporations established under the *Air Corporation Act, 1953* ; (vi) Railway Inspectorate ; (vii) Offences against laws with respect to any of the matters specified above ; (viii) Fees in respect of any of the matters specified above but not including fees taken in any court ; (ix) Implementation of Treaties and Agreements relating to any matter specified above. These subjects are administered by the Ministry through the following organisations : (a) Ministry of Civil Aviation, (b) Civil Aviation

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An *Aeronautical Inspection Office* has been set up at Kanpur with effect from 20th August, 1964 for carrying out inspection of the manufacture of Avro-748 aircraft by Aeronautics India Ltd.

TRAINING CENTRES AND FLYING CLUBS—The Central Government is running the *Civil Aviation Training Centre* at Allahabad, which trains pilots, aerodrome officers, control officers, fire operations, radio operators and technicians. This Training Centre comprises the following wings—(1) Flying School, (2) Aerodrome School, (3) Engineering School, and (4) Communication School. In addition, a Repair and Overhaul Organisation is also attached to it for carrying out repairs and overhaul of the Central aircraft.

There are 18 subsidised flying clubs in India, with their headquarters at Bangalore, Baroda, Hyderabad, Bombay, Calcutta, Coimbatore, Delhi, Indore (with a branch at Bhopal), Jaipur, Jullundur Cantt., Lucknow (with Satellite Centres at Allahabad, Kanpur and Varanasi : the Allahabad Centre has since shifted to Kanpur), Madras, Nagpur, Patna, Patiala, Trivandrum, Bhubaneswar and Amritsar.

There are 3 Government Gliding Centres at Poona, Bangalore and Lucknow and 4 subsidised Gliding Centres at New Delhi, Pilani, Deolali and Ahmedabad.

AERODROMES— There are 82 aerodromes controlled and operated by the Civil Aviation Department. Three aerodromes of Calcutta (Dum Dum), Bombay (Santa Cruz), and Delhi (Palam) are *international airports*.

Major aerodromes are : Agartala, Ahmedabad (Begumpet), Delhi (Safdarjang), Gauhati, Madras (St. Thomas Mount), Nagpur, Tiruchirappalli. There are also 44 *intermediate* and 27 *minor aerodromes*.

The aerodromes at Ahmedabad, Patna, Bombay (Santa Cruz), Calcutta (Dum Dum), Delhi (Palam and Safdarjang) and Madras (St. Thomas Mount), Tiruchirappalli, Varanasi, Jodhpur, Bhub, Port Blair, and Amritsar have been declared *customs aerodromes*.

The total number of beacons in operation at various aerodromes in India is 49.

Aircraft—On 31st October, 1964, 554 aircraft held current Certificates of Registration and 212 aircraft held current Certificates of Airworthiness.

AIR TRAFFIC CONTROL—As a member of the International Civil Aviation Organisation, India has to meet the standards laid down by that organisation. So *Air Traffic Control Organisation* has been established for the maintenance of air-traffic control services for international aircraft landing and passing through the country as well as internal air services. The Traffic Control Organisation is responsible for the safety and control of aircraft in the air and on the ground. For this purpose, the country has been divided into 4 regions with area control centres at Delhi, Calcutta, Bombay, and Madras.

AIRCRAFT MANUFACTURE— The *Hindusthan Aircraft Ltd.* at Bangalore, which was started 24 years ago as a repair, overhaul and

assembly depot, has now grown into an important manufacturing plant. The factory founded in 1940 as a private company, came under the complete management of the Government of India in 1945. Today, the factory is a self-sufficient establishment with several sections. In addition to meeting domestic needs, it undertakes repair and overhaul work for overseas customers, such as Saudi Arabia, Afghanistan, Iran, Ceylon, Burma, etc.

An outstanding achievement of the factory is the designing and manufacture of a trainer aircraft named HT-2, in 1952. This marked the beginning of aircraft production in India. The manufacture of modern light jet fighters is the latest venture of the factory. India's first supersonic fighter HF-24, successfully took to air on its proving flight at Bangalore on 24th June, 1961.

PROGRESS OF CIVIL AVIATION

During 1963, Indian aircraft flew about 535 lakh km., carrying about 12.3 lakh passengers and nearly 767.7 lakh kg. of cargo and mail on scheduled and non-scheduled services taken together.

Scheduled Services

		Kms. flown (in '000)	Passengers (in '000)	Freight (in '000 kg.)	Mails (in '000 kg.)
1947	...	1,50.66	255	25.61	6.37
1951	...	3,13.77	449	3,97.57	32.57
1956	...	3,77.88	559	4,36.42	57.53
1960	...	2,63.61	855	8,42.30	1,50.29
1961	...	4,43.80	973	4,00.70	75.34
1962	...	4,52.04	1,033	3,77.04	81.58
1963	...	4,70.70	1,158	3,72.55	88.31

INDIAN NON-SCHEDULED AIR TRANSPORT SERVICES—

Airways (India) Ltd., Air Survey Co. of India (P) Ltd., Bharat Commerce and Industries Ltd., Kalinga Airlines (P) Ltd., Jamair Co. (P) Ltd., Aviation Service, Wings India (P) Ltd., Cambata Aviation (P) Ltd., and Kasturji & Sons Ltd.

PRINCIPAL AIRLINES OF THE WORLD

B.O.A.C. (England).	Finnair (Poland).
Air France (Paris).	Iberia (Spain).
Lufthansa (Germany).	K.L.M. (Netherlands).
Alitalia (Italy).	Bruathens (Oslo).
Quantas Empire Airways (Australia).	Scandinavian Air Service (Sweden).
Air-India International (India).	Swiss Air (Switzerland).
Pan American World Airways (U.S.A.).	Pakistan International Airways (Pakistan).
Trans-World Airways (U.S.A.).	Air Ceylon (Ceylon).
Sebina (Brussels).	Royal Nepal Airlines (Nepal).
	Thai International Airways (Thailand).

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IMPORTANT AVIATION DATES

- 1911—First official air mail on 18th February, flown from U. P. Exhibition grounds, Allahabad to Naini Junction, 6 miles away, by M. Picquet, a French pilot.
First aeroplane passenger in India was Sir Sefton Branker.
- 1912—Jules Tyck and Baron de Carters gave India first public flying demonstration at Calcutta on Christmas Eve.
- 1918—First flight from Egypt to India by Capt. Ross Smith.
- 1919—First England-India flight by Sqr. Leader McLaren & Lt. Haley.
- 1920—First air-mail service by the Government of India operated by R.A.F. between Karachi and Bombay.
- 1927—Imperial Airways sent first airliner to India, January 8.
Imperial Aviation Department formed in India.
- 1928—First Flying Club founded in India.
- 1929—First regular air mail between England and India on March 30.
- 1930—First India-trained pilot with 'B' Licence was Bhagat Lal.
- 1932—The Tata Airlines, the first Indian company, was established.
- 1933—The Indian National Airways was established in Delhi.
- 1949—First-class internal air mail without a surcharge was introduced in April.
- 1953—Indian Airlines nationalised on August 1.
- 1957—I.A.C. first introduced turbo-prop plane named *Viscount*, in India.
- 1958—India-USSR airline opened by the Air-India International.
- 1960—Air-India entered jet age on April 19, when *Boeing-707* went into service for the first time to London.
- 1961—First India-made supersonic fighter, *HF-24* took to air on June 24.

METEOROLOGICAL AFFAIRS

FUNCTIONS AND ORGANISATION—The Department of Meteorology is widening its scheme every year. It has extended its activities into a new sphere called satellite and rocket meteorology. The scientific activities of the Department includes geophysics, astronomy and astrophysics.

It provides weather service to a wide variety of interests, such as aviation, navigation, railways, communications, irrigation and power projects, agriculture, etc. Its scientific activities cover observation and research in climatology including weather forecasting, agricultural and hydrological meteorology, atmospheric electricity, terrestrial magnetism, seismology, and astrophysics.

The Department maintains 2 Central Offices : the Headquarters Office at Delhi for administrative and technical control and the other at Poona for technical control. The observational network and the provision of meteorological services to various interests are in charge of 5 Regional Meteorological Centres located at Bombay, Calcutta, Madras, Nagpur, and New Delhi. Weather service to various users is also provided by the

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Northern Hemisphere Analysis Centre at New Delhi, the Central Weather Office at Poona, the Meteorological Offices at Alipur (Calcutta) and Colaba (Bombay), 6 main meteorological offices located at the airports of Bombay, Calcutta, Madras, Nagpur, New Delhi, and Gauhati and a large number of smaller meteorological offices and observatories. The Colaba and Alibag Observatories deal with the terrestrial magnetism and atmospheric electricity and control 2 field magnetic observatories at Annamalainagar and Trivandrum. The Astro-physical Observatory at Kodaikanal is continuing the study of Solar Physics, Stellar Astronomy and spectroscopy, radio astronomy and the ionosphere. The *Central Seismological Observatory* at Shillong is the co-ordinating centre for seismic data in India. A section of the Regional Meteorological Centre, Calcutta is responsible for the compilation of the Indian Ephemeris and Nautical Almanac. The offices at Bombay and Calcutta also issue time signals for the use of ships at sea, the telegraphic system in the country and the public. Studies on scientific and applied research were undertaken at the Institute of Tropical Meteorology, Poona and at the International Meteorological Centre, Bombay, besides its other activities. Research studies were undertaken at the different centres of the Department and special research units for studying local forecast problems were set up during 1964-65 at the Regional Directorates of New Delhi, Calcutta, Nagpur, Bombay and Madras.

Meteorological Services are given for :

- (1) Aviation.
- (2) Defence services.
- (3) Shipping, ports and fishing craft.
- (4) Inland warnings are issued for adverse weather, such as heavy rainfall, gales, frost, etc. to a large number of officials of irrigation, agriculture, railways, telegraphs, fisheries, police, etc.
- (5) Services to agriculture : Farmers' Weather Bulletins containing forecasts for next 36 hours with further "outlook" for subsequent 2 days, are issued for broadcast daily through various stations of A.I.R.
- (6) Weather service to public : All-India Daily Weather Reports from Poona and Regional Daily Weather Reports from Bombay, Calcutta, Madras, Nagpur, and New Delhi are issued. The main weather bulletin is also broadcast by A.I.R.
- (7) Mountaineering expeditions, survey and pilgrimage parties.

OBSERVATIONAL ORGANISATION—The observational organisation on the 31st March, 1965 consisted of the following : Surface Observatories 462, Hydro-meteorological Observatories 267, Pilot Balloon Observatories 52, Radio Sonde Observatories 15, Rawin Observatories 14, Radiation Observatories 11, Radar Observatories 9 Ozone Observatories 5, Atmospheric Electricity Observatories 3, Sferics Observatories 3, Seismological Observatories 16, Magnetic Observatories 5, Ionospheric Observatory 1, Astrophysical Observatory 1, Time Signal Stations 2.

TRAINING AND RESEARCH—The Training Section at Poona provides training in Meteorology to the Departmental and Extra-Departmental candidates in the Elementary, Intermediate and Advanced levels.

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As a scientific department, research programmes and studies in Meteorology and other subjects like Astrophysics, Geo-magnetism and Seismology which form part of the scientific activities of the Department, receive growing attention and importance. In addition to whole-time research carried out at the Institute of Tropical Meteorology at Poona, research studies form an important element of the activities of other departmental offices also. *Institute of Tropical Meteorology, Poona* has been established with assistance from the U.N. Special Fund. The first two divisions of this Institute, viz., (i) Division of Forecasting Research and (ii) Division of Climatology and Hydrometeorology are established. Studies are carried out at the Institute on ocean waves, monsoon rainfall, atmospheric turbulence and aircraft performance, mountain waves, jet streams, meteorology of supersonic flight, storm surges, solar radiation etc. *International Meteorological Centre, Bombay* functions as a Special Division of the Institute of Tropical Meteorology in connection with the Meteorological activities of the International Indian Ocean Expedition. The Institute also make studies of the Arabian Sea Summer Monsoon, interaction between lower and upper tropical tropospheres, tropical storms in Indian seas etc. In addition to the above, small whole-time research units are set up at 5 Regional Centres—New Delhi, Calcutta, Nagpur, Bombay and Madras.

Seismology—The *Directorate of Seismological Organisation* in India continues to function at the Headquarters Office at Delhi. It is responsible for co-ordinating the seismological work in the country. The *Central Seismological Observatory* at Shillong continues the work of determination of earthquake epicentres from the data received from Indian observatories.

Hydrometeorology—Service in the field of hydrometeorology are rendered to the Central Water and Power Commission and to the engineers connected with various river valley and flood control projects. Units function for this purpose at New Delhi, Poona and Calcutta.

Geo-magnetism—The Colaba Observatory, together with the primary magnetic observatory at Alibag and other magnetic observatories at Kodaikanal, Trivandrum and Annamalainagar, continue their activities in geomagnetism.

Atmospheric Electricity—Measurements of electrical potential gradient at the surface are continued at New Delhi, Poona and Calcutta.

Sferics—The stations at Sriniketan, Nagpur and New Delhi continue to record the direction of arrival of atmospheres associated with thunderstorm.

Ozone—Measurements are continued at New Delhi, Dum Dum, Kodaikanal and Srinagar for determining total amount and vertical distribution of ozone in the atmosphere.

Astrophysics and Astronomy—The Astrophysical Observatory at Kodaikanal continues its work in the field of Solar Physics, Stellar Physics and Radio-Astronomy.

International Collaboration—This Department continues to take active part in the activities of the World Meteorological Organisation and the International Civil Aviation Organisation. A Supplementary Meteorological Office of this Department continues to function at Katmandu in Nepal.

TOURISM

TOURIST ORGANISATION IN INDIA—Since 1949, considerable attention has been given to the tourist development in India, which is an important source of foreign exchange and a promoter of international understanding. Following tourist offices function under the *Department of Tourism* in the Ministry of Transport.

Overseas—New York, San Francisco, London, Paris, Frankfurt, Chicago, Melbourne, and Toronto.

Regional—Delhi, Bombay, Calcutta, and Madras.

Sub-offices—Agra, Aurangabad, Varanasi, Cochin, and Jaipur.

The Department of Tourism is vested with the responsibility of the development and promotion of foreign as well as home tourism and the administration of tourist offices in India and abroad.

The Department of Tourism is under the charge of a Director-General, who is also the *ex-officio* Joint Secretary to the Government of India. The Department has 6 main wings—Travel Trade, Publicity, Planning and Development, International Tourist Organisations, Research and Statistics, and Administration. The activities of the Department fall under the following 6 heads—

(1) Relaxation of frontier formalities and removal of various travel barriers.

(2) Development of facilities for visitors directly or by cooperation with central and local authorities and the various interests comprising the tourist industry.

(3) Publicising tourist attractions of India by means of propaganda, public relations, etc.

(4) Market research in respect of development of tourism.

(5) Contacts with international travel and tourist promotion agencies at Government and non-Government levels.

(6) Training of tourist personnel.

TOURIST DEVELOPMENT COUNCIL—is the principal advisory body at the national level and is composed of Union Minister for Information and Broadcasting or his nominee, ministers in the State Governments in charge of tourism, 6 members of Parliament, one representative of the Union Territories, 14 members of the public, 8 representatives of the travel trade, 4 Mayors, Chief Commissioner of Delhi, 8 Central Government officers. It is presided over by the Union Minister for Transport.

The main function of this Council is to recommend measures necessary for the promotion of tourist traffic to India and from one part of the country to the other.

4 *Zonal Tourist Advisory Committees* have been reconstituted to look into regional problems in the eastern, northern, southern and western zones.

An *Entertainment Sub-Committee* is constituted with a view to drawing up a programme for providing the right type of entertainment to tourists. This Committee consists of one non-official member of the Tourist Development Council and representatives of the travel trade, the Sangeet Natak Akademi, and the Ministry of Education.

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A *Co-ordination Committee* was set up during 1964-65, which reviews the inadequacies in facilities and arrangements and recommends measure to remove shortcomings. It also considers suggestions received from tourists and other individuals.

Two Corporations have been set up in the public sector to promote tourism. The *India Tourism Hotel Corporation* has been set up with effect from January 21, 1965. The Corporation will have an authorised capital of Rs. 4 crores and will build hotels at thirteen places of tourist interest. These hotels will add 2,200 rooms to the existing hotel accommodation in the country. In addition to hotels, the Corporation would take over from the Department of Tourism, the management of 26 tourist Bungalows, Canteens and Restaurants. The second Corporation called the *India Tourism Corporation* will have an authorised capital of Rs. 50 lakh. Its function is to set up and manage shops in leading cities and at the international airports to make available to tourists imported articles against payment in foreign exchange. The *India Tourism Transport Undertaking* which was set up in November, 1964 with an authorised capital of Rs. 19 lakh, will be a subsidiary organism of the Tourism Corporation. It will import 50 big air-conditioned cars at a cost of Rs. 15 lakh. A *Transport Development Fund* will be set up with a capital of Rs. 30 lakh to give loans to registered transport operators.

Tourist Bungalows— Under the Second Five-Year Plan for Tourism, provision was included for the construction of 12 Tourist Bungalows (class I) at important places of tourist interest. Besides these 12 bungalows, the Department has Tourist Bungalows at Sanchi, Kushinagar, Bodhi-Gaya, Mahabalipuram and the Laxmi Vilas Palace Hotel at Udaipur.

PUBLICITY—(1) Variety of literature is brought out in the form of folders, guide books, inserts, city maps, etc. One of the important publications of the Department is '*India-Travel Manual*'.

(2) One of the most important media of tourist publicity overseas is advertising in newspapers, magazines and journals in America.

(3) Department of Tourism participates in various exhibitions.

(4) Prints of tourist documentaries are supplied to tourist offices overseas and to some Indian missions abroad.

A bi-monthly journal entitled '*Traveller in India*' is brought out by the Ministry of Information and Broadcasting on behalf of the Department of Tourism.

TRAVEL TRADE— (1) The Department of Tourism continues to give support to travel agencies and shikar outfitters, (2) It maintains constant liaison with national carriers, viz., I.A.C., Air India and other international airlines operating through India, (3) Regular liaison is maintained with the Ministry of Railways, (4) Recognition of travel agencies and shikar outfitters—The Committee has accorded recognition to 35 travel agencies with 34 additional branch offices. There are 15 shikar outfitters on the approved list, (5) Hotel Classification Committee appointed by the Government of India in June, 1962 on the basis of Star System, submitted its report on 31st August, 1963 for the first time. The Government have now a complete census of hotels capable of catering the foreign tourists. 186 hotels are considered capable of catering the foreign tourists.

The Committee have classified hotels in 5 categories according to the Stars allotted to them. 49 restaurants have also been considered fit for recognition. The total number of rooms in hotels approved by the Department of Tourism at the end of 1964, was 7,219. The total bed capacity of the approved hotels on 31st March, 1965 was 12,680, (6) The Ministry of Food and Agriculture have started the Institute of Catering and Hotel Management at Pusa, New Delhi, (7) The Department has drawn up a list of certain shops selling articles of special interest to foreign tourists. In 1964, an up-dated list of shops approved at Agra, Bombay, Calcutta, Delhi Madras and Varanasi was published under the title 'Where to Buy', (8) A duty-free shop has been opened at Santa Cruz Airport, Bombay, (9) Sight-seeing Coach Tours for tourists of Delhi, Agra, Jaipur, Nangal, Hyderabad City, Nagarjunasagar, Bombay, Ahmedabad, Calcutta. (10) Guide-training course, (11) The Department of Tourism provides specialised training to the personnel of the travel and tourist industry in *Staff Training School* started under this Department in New Delhi in 1960, (12) With a view to removing difficulties of foreign tourists, the Government of India finalised a scheme to issue all-India liquor permits. The scheme came into force from 15th November, 1963 and issues to tourists liquor permits which are valid for all States in India from Indian missions overseas. The foreign tourists can obtain permits in India from the Director of Tourist Offices at Bombay, Calcutta, Madras and Delhi.

Foreign Tourists— The tourist trade showed an increase of 11.3 p.c. in 1964. A total of 1,56,673 foreign tourists (excluding Pakistanis) visited India in 1964. U.S. tourists were the largest in number (42,674) followed by U.K. (23,328).

India earned nearly Rs. 23 crores worth of foreign exchange from tourist trade in 1964.

The number of Pakistani nationals arriving with permission to stay for not more than three months during 1964 was 2,93,530.

INTERNATIONAL CONTACTS— The Department of Tourism is a member of the following international tourist promotion organisations— (1) International Union of Official Travel Organisations (IUOTO), (2) IUOTO's Regional Commission for South Asia (SATC), (3) Pacific Area Travel Association (PATA), (4) American Society of Travel Agents (ASTA), (5) Federation of International Travel Agencies (IFTA).

TOURIST STATISTICS

*Foreign tourists
excluding
Pakistanis*

*Foreign tourists
excluding
Pakistanis*

1957	...	80,544	1961
1958	...	92,202	1962
1959	...	1,09,464	1963
1960	...	1,23,095	1964

...	1,39,804
...	1,34,360
...	1,40,821
...	1,56,673

RAILWAYS

RAILWAYS IN INDIA— India has an extensive railway network, reaching all major cities. The Indian railway system with a route kilometerage of 57,611 is the largest in Asia. The Indian State Railways are divided into 9 zones. Most of the railways are owned and operated by the Central Government. Those which are still privately owned are narrow-gauge feeder lines and subject to Government regulation. The Indian Railways make up the second largest single system in the world and four-fifths of India's freight is carried over them for long distance.

Daily, more than 46,00,000 people board the trains. The Indian Railways employ 10,00,000 persons at the cost of about Rs. 123 crores per annum.

The first line opened was a small section of 13 miles by the G.I.P. Railway between Bombay and Kalyan on April 16, 1853. The E. I. Railway line between Calcutta and Pandua was the second to follow in August, 1854 and the Madras and Southern Marhatta Railway opened a line from Madras to Arkonam in July, 1856.

Terms for Opening Railways—In the early state, the construction of railways in India was entrusted to British Companies under State guarantee of a minimum return of $4\frac{1}{2}$ to 5 p.c. on the capital invested. The Government provided the land free of cost but retained the right to purchase the railways after 25 or 50 years.

This policy, however, entailed heavy loss to the State, amounting, by 1869, to about Rs. 1.7 crores and after an unsuccessful attempt to enlist the co-operation of Companies without any guarantee of return, the Government adopted the policy of direct ownership, construction and management of the railways.

The policy of direct State construction, however, did not bear fruit as expected. But the Famine Commission, appointed in 1878, strongly urged the early extension of the railway network. Company construction was thereafter revived, and even for State-owned lines management by Companies was favoured.

In dealing with the guaranteed Companies, the Government exercised, as far as found desirable, their rights to terminate the contracts as and when opportunities arose in subsequent years : the method of making use of this right and the manner of continuing management of the railways after State acquisition having differed in different cases.

New Era Begins—With the beginning of the 20th century a new era began. Traffic had grown enormously and the railways had ceased to be a burden on public exchequer. In 1901, Mr. Robertson, a Special Commissioner appointed to enquire into the working of the railways, advocated the discontinuance of the dual system of State and Company management and advised the leasing out of all lines to Companies, with or without guarantee. Public opinion in India had, however, ceased to remain inarticulate and strong feelings were entertained against management by British Companies, which often acted against the best interests of the people and stood in the way of Indianisation and advancement of Indian trade and industry. This policy, however, continued upto 1920-21.

In 1921, a Railway Enquiry Committee under the chairmanship of

Sir William Acworth examined the question of State *vs.* Company management and advocated State management.

In 1923, the Indian Legislative Assembly adopted a resolution advocating State management only and it was decided to eliminate the system of management by the Board of Directors in London. Accordingly, the East Indian Railway was taken over under direct State management in January, 1925 and the G. I. P. Railways in July, 1926. Since then all Company-managed lines have been taken over. After independence in August, 1947, the railway system was nationalised. It is now entirely managed by the Central Government.

ADMINISTRATION OF RAILWAYS The responsibility for the overall control and administration of the railways vests in the Railway Board, set up in 1905. The Board consists of a *Chairman* who is the *ex-officio* Secretary-General of the Railway Ministry, a *Financial Commissioner* and three members, each in charge of Transport, Mechanical and Engineering who are of the status of Secretaries to the Railway Ministry.

Divisional System— In order to provide a unified control of operation and other allied railway activities over a longer area than that of an average district and to vest the responsibility for co-ordinating the working of different departments in the area, Divisional System has been introduced in Indian Railways. The *Central Railway* is divided into seven Divisions with headquarters at Secunderabad, Bombay, Bhusawal, Nagpur, Sholapur, Jabalpur and Jhansi. The *Southern Railway* is divided into eight divisions—Vijayawada, Hubli, Guntakal, Olavakkot, Madras, Madurai, Mysore and Tiruchirapalli. The *Western Railway* is divided into eight Divisions with headquarters at Bombay, Baroda, Kotah, Jaipur, Ajmer, Rajkot, Bhavnagar and Ratlam. The *Eastern Railway* is divided into four full-fledged Divisions—Howrah, Sealdah, Asansol and Danapore and the Dhanbad Transportation Division.

Each Division is under a *Divisional Superintendent* who functions in his sphere more or less as the General Manager does for the entire Zonal Railway. He is, however, under the control of the General Manager. Specialized departments like stores and workshops are excluded from the Divisional control. These are continued to be controlled by headquarters direct as hitherto.

RAILWAY FINANCE— In 1925, the railway finance was separated from the general finance with the object of relieving the general budget from violent fluctuations, thus enabling the railways to carry on a continuous policy. Under the Convention, the railways contributed to the general revenues according to a fixed formula. In December, 1949, it was fixed that during the quinquennium, beginning 1950-51, the railways should pay a guaranteed dividend of 4 p.c. on the capital-at-charge at the end of each penultimate year. The revised Financial Convention which became applicable after 1955-56, prescribed the same rate of payment except that on new lines a moratorium was to be granted during construction and for five years to follow. The *Railway Convention Committee* (see also *Index*), established in 1960, recommended a dividend of $4\frac{1}{2}$ p.c. on the capital-at-charge for quinquennium 1961-66.

FARE AND FREIGHT— The assumption of common carrier liability of the Indian Railways on January 1, 1962 brought about a fundamental change in the railways' responsibility. The revised decimal coinage effective from September 15, 1957 in the case of passenger fares and from October 1, 1958 in the case of freight on goods, parcels and other traffic have been adopted. The commercial departments of the railways have adopted the metric system of weights and measures from April 1, 1960. The unit of weight for the purpose of charge from that date is a quintal or 100 kilograms and the distance between stations is reckoned in kilometres instead of in miles. The revised railway freight structure came into force from October 1, 1958.

LOCOMOTIVE AND OTHER PRODUCTIONS— Internal production is now able to meet the railways' normal annual requirements of rails, wagons and coaches. The Government-owned *Chittaranjan Locomotive Works* (see also *Index*) and the Government-assisted *Tata Engineering and Locomotive Co. Ltd.* are helping to attain self-sufficiency in locomotives. The Chittaranjan Works started production in 1950. The first locomotive was turned out on November 1, 1950. The Chittaranjan Locomotive Works have manufactured upto 31st March, 1965 since its inception, 1,844 steam locomotives and 50 electric locomotives.

The Integral Coach Factory (see also *Index*) at Perambur (Madras) went into production on October 2, 1955 making a major production in passenger coaches.

The Government-owned *Hindustan Aircraft Ltd.* (see also *Index*) at Bangalore is producing all-steel third-class passenger coaches.

The *Diesel Locomotive Works* at Varanasi (see also *Index*) had already assembled 30 diesel locomotives from imported sub-assemblies and turned out 4 with chassis and superstructures fabricated at the factory. It turned out the first locomotive in January, 1964.

TRAINING CENTRES AND RESEARCH— Training facilities for officers in the Engineering and Traffic Departments are provided in railway training and technical institutes. A *Staff College* for Class I and Class II Officers and Special Class Apprentices was opened at Baroda on January 31, 1952. The College provides facilities for training probationary officers and special class apprentices, refresher courses for junior officers (except medical), and special short-term courses on selected subjects for junior officers. There are 50 training schools. Some of them are traffic training schools. In other schools, loco-training staff, apprentice-mechanics, train-examiners and train-apprentices are trained. A *Signal Training School* for inspection staff of the Signalling Department was opened in 1957 at Lallaguda in Secunderabad.

ELECTRIFICATION OF RAILWAYS— The electrification of railways in India began in 1925. The total electrified route mileage on the Indian Railways by March 31, 1962 was 1,285.55 kms. 331 route kilometres of railway lines were electrified during 1962-63.

DIESELISATION— Diesel traction is being adopted gradually. There are 454 diesel locomotives at present.

RAILWAY ZONES— The Indian Railways have been grouped into

9 zones for economy and efficiency of administration. Certain narrow gauge feeder railways owned by private companies are not included in the zonal system, although under the Railway Companies (Emergency Provision) Act, 1951, the Government assumed powers to ensure their efficient operation. The zones are now as follows :—

<i>Zones and Dates of Creation</i>	<i>Headquarters</i>	<i>Route Kilometres as on March 31, 1963</i>
<i>Southern</i> ; Apr. 14, 1951	Madras	9,976.82
<i>Central</i> ; Nov. 5, 1951	Bombay	3,861.26
<i>Western</i> ; Nov. 5, 1951	Bombay	10,063.74
<i>Northern</i> ; Apr. 14, 1952	Delhi	10,364.51
<i>North-Eastern</i> ; Apr. 14, 1952	Gorakhpur	4,967.30
<i>Eastern</i> ; Aug. 1, 1955	Calcutta	3,943.21
<i>South-Eastern</i> ; Aug. 1, 1955	Calcutta	5,996.13
<i>North-East Frontier</i> ; Jan. 15, 1958	Pandu	2,907.06

A new railway zone called *South-Central Zone* was created in 1964. This new zone comprises Sholapur and Secunderabad Divisions of the Central Railway and Hooghly and Vijayawada Divisions of the Southern Railway with some marginal adjustment with headquarters at Secunderabad.

DESCRIPTION OF RAILWAYS

South-Eastern Railway— This Railway caters to the needs of 6 States : West Bengal, Bihar, Orissa, Andhra Pradesh, Madhya Pradesh and Maharashtra. Starting from Howrah, it runs upto Kharagpur. Onwards from Kharagpur, the Railway spreads out in three directions. Westwards the main line goes to Nagpur. To the South, the east-coast line runs to Waltair. The third line runs from Kharagpur in the north-western direction to serve the coal-fields of West Bengal and Bihar. The Raipur-Vizianagram broad gauge section, opened in 1931, links Visakhapatnam with Madhya Pradesh for carrying the heavy manganese-ore traffic for export. This Railway joins the Eastern Railway at Howrah, Asansol, Gomoh, Barkakhana and Chandrapura. It joins the Southern Railway at Waltair and the Central Railway at Nagpur and Katni. Connecting the ports of Calcutta and Visakhapatnam with their vast hinterlands, it serves the rich paddy fields of West Bengal, hinterlands of Orissa and Madhya Pradesh, as also the coal and steel industries of Bihar and West Bengal. The area covered by this Railway is rich in deposits of essential raw materials, such as iron ore, copper, coal, manganese, lime, bauxite and dolomite. There are many development projects on this Railway.

North-Eastern Railway— which came into existence on April 14, 1952, serves the northern part of West Bengal, Assam, Uttar Pradesh and North Bihar. This Railway has been formed by amalgamation of the former Oudh and Trihut Railway and Assam Railway. It passes through an area which is subject to heavy rainfall and consequent floods and

breaches. This line operates in a well-developed agricultural region and carries sugarcane, tobacco, and rice.

North-East Frontier Railway— came into existence on January 15, 1958, by separating a portion of the North-Eastern Railway. This line begins in Assam and serves the northern part of West Bengal. The Darjeeling-Himalayan line is within this Railway.

Eastern Railway— This Railway covers West Bengal, Bihar and parts of Uttar Pradesh and has its headquarters at Calcutta. It extends to Budge-Budge, Diamond Harbour, Lakshmikantapur and Canning to the south, Petropol and Gede to the East Pakistan border, Lalgola and Barhowra to the north along both sides of the Bhagirathi and to Mughalsarai to the north-west *via* Grand Chord, the main line, the Sahibganj loop and the Gomoh-Barkakhana-Daltonganj loop. Starting from Howrah, the main line runs 137 miles to Sitarampur, 5 miles beyond Asansol, from where it radiates in two directions, one *via* Patna and the other *via* Gaya to converge at Mughalsarai, where it joins the Northern Railway.

Connecting Calcutta with its vast hinterland, this Railway provides transportation facilities to the rice, sugar, and jute-producing areas of West Bengal and Bihar, coal and steel industries of these two States and mica and iron-ore mines of Bihar. It serves a number of basic industries like metallurgical and steel manufactures at Burnpur, Kulti and Durgapur, chemical fertilizers at Sindri and locomotive production at Chittaranjan, besides a host of other important industries.

Western Railway— serves Maharashtra, Rajasthan and Madhya Pradesh. The line consists of the former B. B. & C. I. Railway, Saurashtra Railway, Rajasthan Railway and Jaipur Railway. This line serves the great industrial areas around Bombay, Ahmedabad and Baroda and handles tremendous quantities of cotton.

Central Railway— serves Maharashtra, Madhya Pradesh and the north-western part of Madras. The line consists of the former G.I.P. Railway, Scindhia Railway, Dholpur Railway and Nizam's State Railway.

Southern Railway— On April 14, 1951, the three railway systems, viz., Madras and Southern Marhatta Railway, South Indian Railway and Mysore Railway were integrated into a single railway zone—the Southern Railway, which serves the densely-populated fertile areas of Madras, Mysore, Kerala and parts of southern Maharashtra and Andhra.

Northern Railway— This Railway came into being in 1952 through the synthesis of the three divisions of the former E. I. Railway, a portion of the B. B. and C. I. Railway and the whole of the Eastern Punjab, Jodhpur and Bikaner Railways. This line serves Punjab, Delhi, northern and eastern Rajasthan, and Uttar Pradesh upto Banaras.

SOME RAILWAY ORGANISATIONS

Central Standards Office— This Office at New Delhi looks after all works connected with the production of standard designs and specifications of all materials, plant and rolling stock in use on Indian Railways.

There separate branches of this Office deal respectively with mechanical engineering standards, civil engineering standards and specifications, while a separate research branch undertakes civil and mechanical engineering research.

Indian Railway Conference Association— This Association was first organised in 1871. The present organisation was inaugurated in 1902 establishing the permanent Conference, independent of Government. The Association lays down rules for the interchange of stock between railways and acts as a central co-ordinating agency for tackling all problems of common interest of the different systems of railways in regard to transport, such as coaching tariff, freight structure, interchange rules, cross traffic rules, etc.

Research, Design and Standard Organisation— This is in the charge of a Director-General for co-ordinating the functions of the three different wings of the Organisation.

Consultative Committees— Constant and close consultation between public and the railway administration is served through the following committees—

(1) *Regional Railway Users' Consultative Committees* at the levels represent the local users in the territories served by the railways including agricultural interests.

(2) *Zonal Railway Users' Consultative Committees* at the headquarters of each railway zone.

(3) *National Users' Consultative Council* at the Centre deals with matters of all-India importance relating to services and facilities provided by the railways.

(4) *Divisional Regional Railway Users' Consultative Committees* were set up in 1958 for each division of the railways on which divisionalisation has already been brought out.

(5) *Zonal Parliamentary Committees* have been formed, which meet the respective General Managers of the Zonal Railways to deal with the great variety of problems of interest.

Other Committees are—*Time-Table Committee, Suburban Railway Users' Consultative Committee, Passenger Amenities Committee, Catering Supervisory Committee and Book-stall Committee.*

Railway Rates Tribunal—This Tribunal was established in 1949. It enquires into complaints lodged by the commercial bodies and representative trade associations in the matter of freight charges on railways and on other cognate matters. Its office is located in Madras. The Tribunal deals only with freight rates and have mandatory jurisdiction. It consists of a President and two members. To assist the Tribunal, two panels of assessors are constituted, one representing trade, industry and agriculture and the other, the railways.

Railway Service Commissions—are at Bombay, Calcutta, Allahabad and Madras for the purpose of recruitment of railway personnel. Each Service Commission has a Chairman, a Secretary with a secretariat and one or two members.

Efficiency Bureau—has been set up mainly to investigate problems having a bearing on the efficiency of the railways in various facets of working and to suggest ways and means of securing improvements in efficiency.

Central Clearing House— There is a Clearing Accounts Office at Delhi, whose main function is to allocate inter-railway revenue and expenditure under various heads to different railways.

A Central Board of Railway Research—consisting of eminent scientists, engineers and industrialists, has been set up to advise on the programme of research and development of the railway organisations and to ensure co-ordination between other sister institutions and manufacturers.

RAILWAYS UNDER THE PLANS— The main problem of the Plans during initial years is rehabilitation and replacement. In the First Five-Year Plan, Rs. 423.73 crores were spent on the rehabilitation and expansion of railways. The Second Five-Year Plan allotted Rs. 1,121.5 crores. The Third Plan envisaged an outlay of Rs. 1,477 crores for goods traffic, increase of passenger traffic, acquisition of locomotives, coaches and wagons, doubling of track, renewal of track, electrification, etc.

RAILWAY STANDARD—The Indian Railways have 4 classes of passenger travel—*air-conditioned, first, second and third*. On single tickets break of journey for distances exceeding 200 miles is allowed at any station en route. The first break of journey cannot be made until an initial distance of 240 kilometres has been covered. Concessional hill station return tickets at $1\frac{1}{2}$ single journey fares, valid for three months, are issued during summer months for important hill stations provided the distance is more than 150 miles. Circular tour tickets for standard itineraries are issued on payment of concessional fares equal to $\frac{3}{4}$ th of the public tariff fares. These tickets for a minimum distance of 1500 miles are available for all mail and express trains and to break journey is permissible as often as desired so long as no part of the route shown on the ticket is travelled more than once.

OPERATIONS OF INDIAN GOVT. RAILWAYS, 1963-64

Freight originating (million tonnes)	...	...	192.2
Freight tonnes-kilometres (million)	...	...	106,841
Goods earnings (Rs. million)	...	...	3,917
Passengers originating (million)	...	...	1,867
Passenger kilometres (million)	...	...	88,527
Passenger earnings (Rs. million)	...	...	1,852

MILEAGE OF INDIAN GOVT. RAILWAYS

		Mileage			Mileage
1863	...	2,507	1947-48	...	33,985
1873	...	5,697	1958-59	...	35,081
1883	...	10,447	1959-60	...	35,213
1893	...	13,459			
1903	...	25,956			
1913-14	...	34,656	1960-61	...	56,963
1923-24	...	38,039	1961-62	...	57,089
1933-34	...	42,953	1962-63	...	57,404
1943-44	...	40,512	1964-65	...	57,611

RAILWAY FINANCE

(In crores of Rupees)

		<i>Capital at charge</i>	<i>Gross earnings</i>	<i>Working expenses</i>	<i>Net earnings</i>
		742,20	183,69	163,94	19,75
1947-48	...	838,18	264,62	214,39	50,23
1950-51	...	975,91	317,51	260,17	57,34
1955-56	...	1,527,83	459,38	361,88	97,50
1960-61	...	1,690,07	502,29	392,35	109,93
1961-62	...	1,903,61	569,75	431,66	138,08
1962-63	...		660,85	439,00	
1964-65	...				

RAILWAY TRAFFIC

		<i>Passenger (In lakhs)</i>	<i>Passenger earnings (In Rs. lakhs)</i>	<i>Goods earnings (In Rs. lakhs)</i>
		130,78	99,22	189,77
1950-51	...	129,74	108,75	177,92
1955-56	...	161,59	132,52	281,26
1960-61	...	171,21	151,80	300,81
1961-62	...	177,00	170,18	343,40
1962-63	...			

RAILWAY FACTS

The Indian Railways at present is the biggest Railway system in Asia and the second largest individual railway network in the world.

India has the second largest nationalised railway system in the world, the first being that of the U.S.S.R.

There are 6,460 railway stations in India.

The Indian Railways operate over 7,000 tracks daily, of which about 4,500 are passenger trains.

If all the passenger coaches of different railways could be put together, a 125-mile long train could be formed.

Daily, the Indian Railways carry about 46 lakh passengers of the country's population.

India has 3 Gauges of railway track—Broad Gauge (5'-6"), Metre Gauge (3'-3 $\frac{3}{8}$ ") and Narrow Gauge (2'-6" and 2').

The famous trains of India are : Deccan Queen of the Central Railway which links Bombay with Poona. It is the fastest short-distance train.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh. hour. maintaining for some time a start-to-stop speed of 45 miles per hour. (2) *Flying Rance* run by the Western Railway between Bombay and Surat, is a corridor train. (3) *Delhi-Madras Grand Trunk Express* runs 1,361 miles and traverses half the sub-continent of India. (4) *Frontier Mail*, though shorn of its previous grandeur, provides the shortest and the quickest service between Bombay and North India.

The railway station with smallest letters is 'IB' railway station on the South-Eastern Railway between Jharsuguda and Brajarajnagar in Orissa.

The biggest railway tunnel in India is the *Torsi Tunnel*, $\frac{3}{4}$ th of a mile long.

Fully vestibulated third-class Janata Express was introduced on October 7, 1955 between Delhi and Howrah. Similar trains have since been introduced on Delhi-Madras, Madras-Howrah and Madras-Bombay routes.

The longest railway platform in India (2,415 ft.) is at Sonapur station.

The longest railway bridge, the Sone Bridge is 10,052 ft. long and has 95 spans, each 100 feet apart.

The Railways are the largest employers in the country, employing nearly a million men at an annual cost of about Rs. 123 crores.

IMPORTANT RAILWAY DATES

1853—First Indian Railway was opened on 16th April, 1853 between Bombay and Thana, a distance of 13 miles.

1905—Railway Board came into existence in March, 1905.

1925—First electric train in India ran between Victoria Terminus (Bombay) and Kurla.

1937—First air-conditioned coach to run in public service in India was attached to an Indian train running between Bombay and Delhi.

1951—Formal opening of the *Chittaranjan Locomotive Works* on 26th January, 1951.

1952—*Railway Staff College* at Baroda was opened in Jan., 1952.

1953—*Indian Railways Centenary Exhibition* was opened in New Delhi and Calcutta on 2nd Oct., 1953.

1956—First vestibulated air-conditioned third-class express was run between Delhi and Calcutta on 2nd October, 1956.

First all-India all-steel integral broad-gauge passenger coach was launched at Perambur (Madras) on 14th August, 1956.

PORTS

INDIAN PORTS— With a coast-line of 5,690 kilometres, India possesses only seven *major ports*, which are Bombay, Cochin, Mormugao, Visakhapatnam, Madras, Calcutta and Kandla. Bombay, Cochin and Visakhapatnam are natural harbours. Madras is an artificial one, barely protected from weather, particularly during October and November when cyclones prevail. Calcutta lies at the head of a 120-mile-long turbulent river with a wide range of tides to which deep-drafted ships have to suit themselves. Sixth major port of Kandla in Kutch, has been recently developed. Kandla serves the vast hinterland of Punjab, the north, western and central India more economically than Bombay.

Technically, *major port* is one which is capable of taking ocean-going steamers with a registered tonnage of 4,000 or more and berth them along harbour and it must carry on a minimum requisite trade of 5,000,000 tons per annum. Other ports with an annual cargo tonnage below 100,000 but not less than 1,500, which have any importance for any reason (such as passenger amenities, customs or naval requirements etc.), are classified as *intermediate ports* and the rest as *minor ports*.

The ports of Bombay, Calcutta and Madras are administered by Statutory Port Trust Boards subject to the overall control of the Central Government. The ports of Cochin, Kandla and Visakhapatnam are administered directly by the Centre through local administrative officers assisted by Port Advisory Committees. Decision regarding the administration of Mormugao port will be settled shortly. The administering authorities are a board of trustees for each port. The Indian coast-line is also served by a large number of *minor ports*; about 225, of which 150 are working ports, which together handle a coastal and overseas traffic of about 78 lakh tons per annum. Minor ports are under State Governments. The following important points are to be noted—(1) 80 per cent of all trade passes through the six major ports; (2) 75 per cent of the traffic of the major ports falls to Calcutta and Bombay; (3) At Calcutta and Visakhapatnam, the larger share consists of exports, while at Madras, Cochin and Bombay imports predominate. At Madras, exports have usually been about one-third of imports.

WAGE BOARD— A Wage Board with Shri L. P. Dave as Chairman, and with two independent members, three members representing employers and an equal number representing workers was set up on 13th November, 1964, for the port and dock workers at the Major Ports. The Wage Board will determine the categories of employees to be covered and will work out a wage structure for them in accordance with certain principles that have been laid down.

CONGESTION IN PORTS— The main hurdle of Indian ports is their congestion. Bombay and Calcutta Ports suffer from acute congestion due to the bunching of food ships. The bunching itself is often due to frequent strikes, go-slow tactics of stevedore workers and ultimately inadequate port facilities. The American expert team which studied port

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congestion in India reviewed that a maximum discharge rate of 780,000 tons of foodgrains a month with a monthly rate of 650,000 tons for all ports should be possible with little additional equipment.

NATIONAL HARBOUR BOARD— The Government of India formed a *National Harbour Board* in 1950 to advise the Central and State Governments on the co-ordinated development of ports with special attention to minor ports. The Board is composed of the Government of India, State Governments and of the major port authorities and non-official members of trade, industry and labour and has the Minister for Transport and Railways as its Chairman. The National Harbour Board constitutes the principal forum for discussing common problems relating to ports.

DESCRIPTION OF MAJOR PORTS

Kandla— It has been developed after independence as a result of partition. With the loss of Karachi after partition, there was no big port along 1,000 mile-long coast-line between Bombay and Karachi to serve the vast hinterland. So in 1948, the Government of India decided to start a harbour at Kandla in Gujarat, to relieve the pressure on Bombay Port. Kandla was declared a major port in April, 1955 with a hinterland—Rajasthan, Punjab, Delhi and north-west Uttar Pradesh. It is a centrally administered port.

A Free Trade Zone was created at the port on March 7, 1965. The Zone has been set up in a 320-acre area near the port and provides for the establishment of small and medium industrial units and the necessary facilities for them. This is the first of its kind in this country. The township of Gandhidham has grown near Kandla on the Kutch coast.

Mormugao— One of the finest ports in Asia, was once a Portuguese port, now an Indian port after the occupation of Goa by India. Indian Ports Act of 1908 was extended to the port of Mormugao on 30th November, 1963 and it is recognised as a major port from 15th December, 1963. It has a great export trade including mainly iron and other materials. The Department of Transport took over the administrative control of this port on 8th November, 1962. Endowed with a fertile and mineral rich hinterland the port accounts for nearly 60 p.c. of the country's total iron export. Thanks to the rich iron ore deposits found in the region nearby and the cheap transport facilities, the iron ore traffic through Mormugao is prospering very well. About 50 ships on an average can be at anchor in the sheltered water of the port during the fair season between September and June. During monsoons only 15 ships can be accommodated.

Bombay— Situated almost midway on the west coast of India, Bombay is the only natural deep-water harbour of India. Possessing almost all the natural facilities for shipping, it is one of the safest and most spacious of the great seaports of the world. Almost one-half of the foreign trade of India passes through Bombay Port. The harbour covers 75 square miles and provides secure and ample shelter for shipping at all seasons of the year, being 14 miles long and 4 to 6 miles wide with a general depth varying from 22 to 40 feet. Seeds, hides and skin, cotton, oil-cakes, piecegoods, turmeric, ores, tobacco are chief exports from Bombay.

There are three main docks and a number of open wharves for country crafts. Besides the enclosed docks, there are situated along the harbour a number of 'Bunders' or open wharves and basins, where coasting country crafts carry on business. A Dock Expansion Scheme has been taken up at a cost of Rs. 10.92 crores. There are three docks at Bombay Port, viz., Alexandra Dock, Victoria Dock and Prince's Dock.

A new Rim Bascule Bridge across the entrance lock in the Alexandra Dock in replacement of the old bridge dismantled in 1957, costing about Rs. 50 lakhs, was commissioned in January, 1965.

Madras— This third largest port of India, situated on the east coast of India, has a vast hinterland comprising the States of Madras, Andhra Pradesh and Kerala. It is controlled by the Madras Port Trust. It was an open roadstead with surf-beated coast-line, but the present harbour has been formed by two concrete walls projecting into the sea. It is an artificial port developed by man's ingenuity. It has at present alongside berths, besides several mooring berths; and the Buckingham Canal links it with a rich tobacco-growing region. This port links the city with the tobacco-growing areas and brings large tonnages for export. Chief imports are oil, coal, foodgrains, metals, timber, textiles, chemical manures, steel, hardware, etc. Chief exports are hides and skins, edible oils, textiles, ores, tobacco, onions, mica, etc.

Jawahar Dock, the new wet dock, has been built at a cost of Rs. 8 crores, and was opened on 6th November, 1964. The dock can take in 6 vessels at a time.

Calcutta— is the largest terminal port in South Asia. Situated on the Hooghly river, 90 miles from the Bay of Bengal, it commands the largest and the richest hinterland. It not only handles the import and export trade of West Bengal, Assam and Bihar, but most of the exports of U. P., Orissa and Madhya Pradesh are sent through Calcutta Port. The chief exports are coal, tea, gunnies, bone and bone-meal, skin, ham, iron and steel manufactures, lac, oil other than petroleum, scarp ones, pig iron, hides, mica. The principal imports are salt, foodgrains and flour, machinery, petroleum, iron and steel, metals other than iron and steel, lubricating oil, cement, rubber, chemical products, soda-ash, sugar, timber, tobacco, paint, varnish, etc. Calcutta suffers from the inevitable disadvantages due to its location, several miles inland on the bank of the estuarine Hooghly, which is subjected to strong tides and bores from the sea. Calcutta's shipping is at the mercy of the tides. The ships can enter and clear only at a fixed hour corresponding with the tides.

The port of Calcutta has two main docks—Kidderpore Dock and King George's Dock. At Garden Reach (Kidderpore) there are five jetties. The Calcutta jetties are nine in number. At Budge Budge, some 14 miles from Calcutta, there are eight floating jetties for oil tankers. There are five dry docks at the port of Calcutta. The Port at present possesses five large suction dredgers of hopper capacity of 3,000 to 4,000 tonnes and one small suction dredger.

The main problem is the improvement in the Hooghly drafts. The supply of upland water through Farakka Barrage (see *Index*) would ease

present situation in the port. In spite of the improvements in the Hooghly bars, the deep-draft vessels would be unable to go upto upper reaches of the river. Hence the need arises for a subsidiary port at **Haldia**, which is being built. An oil refinery is also expected to be built at Haldia at a cost of Rs. 70 lakhs. A steady 40-ft. draft would help to carry bulk carriers and tankers. The *Haldia Dock Project* is estimated to cost at about Rs. 30 crores. For the present, Haldia is being used as an anchorage for the lightening of deep-draft foodgrain ships in fair-weather season, November to February.

Cochin—It is 580 miles south of Bombay and 200 miles north of Cape Comorin. It is the finest natural harbour in the East. Annual traffic for Cochin Port is around 2.4 million tons. Behind an opening from the sea which is about 400 yards wide, there is an area of 120 sq. miles of sheltered backwater, a calm harbourage all the year round within a vast expanse of lagoons. Even in the worst monsoon weather, vessels can lie comfortably in the harbour and carry on landing and shipping operations. The port of Cochin serves most of the Malabar and Travancore-Cochin area. It lies on the direct route to Australia and the Far East from Europe. Its hinterland is rich in natural produce, such as pepper, cardamom, tea, coffee, rubber, timber, etc. The Port, which includes the Willingdon Island, is situated in an area famous for its system of backwaters and inland waterways.

Work on the construction of a four-berth wharf in the Ernakulam Channel at an estimated cost of Rs. 2.24 crores was started in 1955. Works costing Rs. 30 lakhs have been sanctioned for accommodating tankers bringing crude oil for the new refinery.

Cochin Port is directly administered by the Ministry of Transport and Communications through the Administrative Officer, assisted by an Advisory Committee.

The range of exports covers coir yarn, fibres, mats and mattings, cashew-kernels, cashew-shell liquid, spices, lemongrass oil, raw earth concentrates, cotton, handloom piecegoods, cotton sewing thread, crude drugs, soap, hydrogenated oil and glycerine. Imports cover a wide field including coal, chemicals, grains, hardware, paper, petroleum and petroleum products, copra and metals.

Visakhapatnam— is a great ore-exporting port and is the only land-locked and protected port in India, situated about midway between Calcutta and Madras. The new scheme for this Port relates to the building of four additional berths—two for ores and two for general cargo. The port is controlled by the Ministry of Transport and Communications. Owing to a hill-range bordering in the sea, the harbour remains concealed from the vessels plying on the ocean outside. In October 1933, the Port was opened to ocean-going ships. The principal articles of export are manganese ore, bunker coal, tobacco, myrobalan, and oilseeds. Exports are much larger than imports.

It is now the centre of ship-building industry in India, where Scindia Steamship Company first established ship-building yards.

During the year 1963-64, the total traffic handled by the Major Ports

was 46.17 million tonnes as shown below as against 42.71 million tonnes handled in 1962-63 :—

(In million tonnes)				
Name of port		Imports	Exports	Total
Bombay	...	11.89	5.46	17.35
Calcutta	...	6.03	4.91	10.94
Cochin	...	2.03	0.42	2.45
Kandla	...	1.49	0.29	1.78
Madras	...	2.59	1.58	4.17
Mormugao	...	0.12	5.84	5.96
Visakhapatnam	...	1.85	1.67	3.52
Total	...	26.00	20.17	46.17

During the year 1963-64, the number of ships which called at the Major Ports and their gross tonnage were as follows :—

Name of port	No. of ships entered	Gross tonnage
Bombay	3,276	22,563,601
Calcutta	1,828	12,911,929
Cochin	1,356	8,088,326
Kandla	297	2,425,679
Madras	1,280	9,195,162
Mormugao	594	4,725,807
Visakhapatnam	681	5,297,256
Total	9,312	65,207,760

INTERMEDIATE AND MINOR PORTS

Tuticorin— This Port is open all the year round and has, next to Madras and Cochin, the largest trade in southern India. The harbour is so shallow that steamers anchor about 5 miles from the shore and continuous dredging is necessary to keep the channel open between the sea and roadstead. There is a considerable trade with Ceylon in rice, pulses, onions, chillies and livestock.

Work has begun to turn Tuticorin harbour into a major port. Tuticorin harbour project was inaugurated on the 5th November, 1946. It was the first deep-sea harbour in India. This Port would be the nearest major Indian port for ships carrying goods to southern India. This will be completed within 4 or 5 years by Indian experts. The cost of the Tuticorin Port Development will be Rs. 24 crores. The project will have the provision of six berths for general cargo, salt, oil and ship repairs and two for coal. The harbour proper will be formed by enclosing an area of about 4 km. by 1.3 km. by two breakwaters, leaving out an entrance of about 122 metres for ships to move in and out. A turning circle of about 400 metres diameter will be provided near the entrance. An approach channel, 183 metres wide, will also be provided.

Saurashtra Ports— For purposes of administration, all the ports in Saurashtra have been divided into six groups, each under a port officer with headquarters at the most important port in the group. The six groups are—

Porbandar—is an open roadstead in the Arabian sea, used by sailing crafts and lighters.

Bhavnagar—is the most developed port of Saurashtra.

Bedi—is a well-equipped lighterage port on the south side of Gulf of Kutch.

Veraval—is located on the south-west coast of Saurashtra by the Arabian Sea.

Okha—is an western Indian port situated in a detached portion of the Kathiawar peninsula. The port is available even to large ships at all stages of tides and at all seasons of the year. This port is easily the finest of the smaller ports of India.

Mandvi—is an open sea roadstead on the Gulf of Kutch.

Surat— situated 14 miles from the Arabian sea with which it is connected by a river, is navigable only by small country crafts. Surat was one of the earliest and most important of the E. I. Co.'s factories. But the trade at Surat has considerably declined due to the rise of Bombay Port.

Mangalore— is a tidal port served chiefly by backwater communication with hinterland. The backwater of Mangalore is $3\frac{1}{2}$ miles long and 2,000 ft. wide. Mangalore is the north-western terminus of Southern Railway. The chief exports to Europe are pepper, tea, cashew-kernels, coffee, sandalwood from Mysore, rice, salt fish, dried fruits, fish-manure etc. Mangalore is the favourite port for the Laccadive and Amindivi Islanders who bring their coir and other coconut products for sale here.

Karwar— is located in the shelter of Karwar head on the Arabian Sea.

Calicut— is some 42 miles from Tellicherry. The principal exports are coir, coir fibre, copra, coffee, tea, pepper, ginger, rubber, ground-nuts, raw cotton and fish manure.

Alleppy— is the premier port and commercial centre in Kerala and is situated about 35 miles south of Cochin. A canal connects the port with the interior backwater. It possesses a roadstead affording safe anchorage during the greater part of the year. The chief exports are copra, coconuts, coir fibre and matting, cardamom, ginger and pepper.

Orissa Ports— are *Chandbali* and *Pradeep*. Chandbali is situated in an important part of Orissa and is 38 miles away from sea anchorage. It has a direct flourishing trade with Calcutta. Pradeep is a new port of Orissa situated on the right bank of Mahanadi, roughly 10 miles from its old mouth on the Bay of Bengal. The Rs. 20-crore *Paradeep Port Project* has been fully ordered to the required draft, size and shape and can receive deep-draft ships inside the lagoon.

Quilon— is the Coilum of Marco Polo. It is connected with Alleppy by backwaters. The chief industries are cotton spinning and tile manufacture. Vessels anchor about $\frac{3}{4}$ miles from the shore and a railway siding runs up to the landing place.

Nagapattinam— is the chief port in the Tanjore district, about 12 miles south of Karikal. Numerous sailings trade between this port and Ceylon.

Kakinada— is situated on the Cocanada Bay, just north of the Godavari river, some 90 miles south of Visakhapatnam and 270 miles north of Madras. Principal shipments are raw cotton, groundnuts, castor-seeds, rice. Imports consist of kerosene, metals, etc.

Karikal— was a French Settlement covering an area of 53 square miles and a sea-board of 12 miles and is almost surrounded by Tanjore district. The chief traffic is rice, betelnuts, matches, fireworks and kerosene oil.

Pondicherry— is now an important port of India and is situated on the Coromandel Coast, 100 miles south of Madras. The roadstead possesses a good anchorage. Pondicherry is the centre of the export trade in groundnuts.

Bhatkal— is ideally situated to meet the needs of Mysore. A number of important industries are located in this area which is known as Naland area.

SHIPPING

POSITION OF INDIAN MERCANTILE MARINE— India has about 5,690 kilometres of coast-line extending international trade with the East and the West, a vast population to 'feed' and good prospects for industrialisation. It fully realizes the need of a powerful merchant navy, able to compete in speed, carrying capacity and efficiency of service with the best mercantile marines of other nations.

India had a tonnage of only 2.5 lakhs engaged in coastal and adjacent trade before independence.

The Indian Shipping Companies in the public and private sectors are now members of almost all the important Shipping Conferences relating to Indian's foreign trade. So Indian Shipping has fairly made satisfactory progress in *liner trades*.

The position is different in respect of tramps and tankers. It is estimated that it has a share of only 3 to 4 p.c., where it has practically no share in the oil trade. India's national shipping policy envisages that it should secure a share of 50 p.c. in all overseas trade.

The *Shipping Policy Committee* of 1947 laid down the following objectives for securing a tonnage of two millions in the near future : (1) 100 per cent of the coastal trade of India, (2) 75 per cent of India's trade with Burma, Ceylon and other neighbouring countries, (3) 50 per cent of India's overseas trade and (4) 30 per cent of the Orient's trade, formerly carried by Japanese, German and Italian vessels.

The Government of India, by their resolution on July 12, 1947, fully endorsed the above view. They agreed that the definition of Indian

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Shipping should be shipping owned, controlled and managed by Indian nationals. They also laid down the following conditions as for "Indian Shipping Companies" :—(a) The steamers should be registered at a port or ports of India, (b) At least 75 p.c. of the shares of the companies should be held by Indians in their own rights, (c) All the directors should be Indians, (d) Managing agents, if any, should be Indians.

Further, steps were taken to reserve the coastal trade of India for Indian ships only and a system of statutory licencing was introduced under the *Control of Shipping Act, 1947*, to give effect to the policy on coastal reservation.

The steps taken by the Government for the development of Indian Shipping are detailed below :—

- (1) Reservation of coastal shipping.
- (2) Grant of loans.
- (3) Sale of ships built at the Hindustan Shipyard at the United Kingdom parity price.
- (4) Allotment of Government-owned and/or controlled cargo.
- (5) Inclusion of clauses in trade agreements to ensure a proportion of the cargo to Indian ships.
- (6) Establishment of shipping services with the U.S.S.R. and Poland.
- (7) Sponsoring admission to International Conferences.
- (8) Establishment of State Shipping Corporation.
- (9) Establishment of a Directorate.
- (10) Administration of labour.
- (11) Training of personnel.

SHIPPING CONTROL DEPARTMENT— The Shipping concerns several Ministries : Transport Production, Commerce and Industry, Defence, Works, Housing and Power. The Directorate-General of Shipping was set up in Bombay in 1949. It is the central body of the Government of India, controlling the whole problem of shipping in the country. Semi-Government shipping corporations, maritime conventions, seamen's welfare, nautical surveys, licences for deep-sea navigation and lighthouses are among the several maritime subjects which are dealt with by the Directorate. Three principal officers of the Mercantile Marine Department at Bombay, Calcutta and Madras function under the jurisdiction of the Director-General. The functions of the Director-General include the implementation of the Government's policies with regard to the development of India's merchant navy and the co-ordination of the activities of various ports.

SHIPPING DEVELOPMENT FUND— Important step taken by the Government is the grant of loans on reasonable terms to Indian Shipping Companies for the acquisition of additional tonnage. Loans to the extent of over Rs. 24 crores during the First Plan and about Rs. 15 crores during the Second Plan have been sanctioned to various shipping companies for the purchase of second-hand ships.

MERCANTILE MARINE DEPARTMENT— For the purpose of administration of the Merchant Shipping laws and rules, the Indian coast-line is divided into three districts—Bombay Mercantile Marine District, Madras District and Calcutta District. The most important functions of

the Department are : (1) Registration of Ships, (2) Periodical survey of sea worthiness, (3) Conduct of examinations for various certificates of competency as navigating and engineer officers.

COMMITTEES & BOARDS

(1) **Consultative Committee of Overseas Shipping Interests**— With a view to ensuring better understanding and co-operation between the Government of India, the country's export trade and the foreign shipping interests operating in India, the above additional Committee was founded in 1955 with 7 members, 4 from overseas shipping conferences, 2 from Indian National Steamship-owners' Association and one from the export trade sphere.

(2) **Consultative Committee of Shipowners**— With a view to bringing about better liaison between the Government and the Indian shipping industry, an advisory body, called Consultative Committee of Shipowners has been constituted.

(3) **Shipping Co-ordination Committee and the Chartering Organisation**— was set up in January 1958, to canalise the transport of Government-owned/controlled cargoes in Indian vessels.

(4) **National Shipping Board**— was reconstituted in 1963. It advises the Government on all matters relating to Indian Shipping.

(5) **Central Advisory Committee for Lighthouse**— This is a statutory body with advisory function, set up under the Indian Lighthouse Act and consists of both officials and non-officials.

(6) **Central and Regional Advisory Committees for Sailing Vessels**— were constituted in 1960. The Central Committee advises the Government on important matters of all-India nature affecting the sailing vessels industry. There are at present four Regional Advisory Committees, each at Bombay, Jamnagar, Tuticorin and Masulipatnam.

(7) **The Merchant Navy Training Board**— was constituted by the Government of India to function as a Representative Advisory Board to deal with the problems relating to the co-ordination and supervision in respect of the different merchant navy training establishments.

(8) **Seamen's Welfare**— Seamen's welfare officers at Bombay, Calcutta and Madras in India and Sydney, Glasgow, London and Liverpool abroad continue to look after the interests of the seamen in all affairs.

(9) **Indian National Steamship Owners' Association**— came into existence in 1930 to promote and protect the interests of national shipping, shipbuilding and allied industries.

(10) **Deck Passengers Welfare Committees**— are in existence at the ports of Bombay, Calcutta, Madras and Nagapattinam and look after the facilities of deck passengers of these ports.

MERCHANT SHIPPING ACT— This Act was passed in 1958. The Act, among other things, provides for the first time in the history of independent India, the opening of a register of Indian ships. It also provides for the setting up of a *National Shipping Board* and a *Shipping*

Development Fund, which will be made up of loans and grants from the Centre and will provide finance for shipping development. The new Act fixes 75 per cent Indian capital and 25 per cent foreign capital if a ship is to be called an Indian ship and be eligible to be brought under the Indian Register.

80 ships aggregating to 1,90,728 gross tons were registered under Merchant Shipping Act during 1964-65.

PROGRESS OF INDIAN SHIPPING— The Indian-owned tonnage at the end of November, 1964 stood at 13.87 lakhs G.R.T. as against 12.13 lakhs G.R.T. at the end of December, 1963, thus working out to a net increase of about 1.74 lakhs G.R.T. for eleven months. India has 223 vessels, totalling 1.4 million G.R.T., in operation.

COASTAL SHIPPING— 122 vessels with 4,71,000 G.R.T., are engaged in coastal trade.

OVERSEAS SHIPPING— 97 vessels with an aggregate of 9,16,000 G.R.T. are engaged in overseas trade.

SHIPPING CORPORATION AND OTHER COMPANIES

The setting up of Shipping Corporations in the public sector is an important step. The first Shipping Corporation was the Eastern Shipping Corporation set up in March, 1960, on a State-cum-private ownership basis. On the 15th August, 1956, the Corporation was taken up by the Government. Second Shipping Corporation was the Western Shipping Corporation set up in June, 1956 as a wholly Government-owned concern.

These two Government-sponsored Shipping Corporations were merged in 1961 under the name of *Shipping Corporation of India Ltd.* (See also *Index*). This Corporation has an authorised capital of Rs. 35 crores and has now 32 vessels aggregating to 2,82,491 G. R. T.

With the acquisition of a supertanker of 45,250 tons (deadweight) from Japan by the Corporation, it is envisaged that the gross registered tonnage of the Corporation will exceed five lakhs by 1967-68. The tanker 'Lajpatrai' was launched on March 16, 1965 at Tokyo.

The Shipping Corporation of India is operating on 8 sectors—India East Coast/Far East, India West Coast/Far East, India/Australia, Madras/Singapore, Bombay/East Africa, India/U.K. Continent, India/Poland and India/Black Sea.

Mogul Line Ltd., which was a subsidiary company of the Shipping Corporation of India, is now fully a separate Govt. Company and has a fleet of 4 passenger-cum-cargo ships of about 26,000 G.R.T. engaged in the Haj pilgrim traffic.

There are 30 other companies operating in overseas and coastal trades.

Indian Companies, now participating in the overseas trade, are the following—(1) *Scindia Steam Navigation Company* owns along with its subsidiaries, about 40 p.c. of total Indian tonnage and operates the largest number of ships both in the coastal and overseas trades of the country. The Company today owns 47 vessels, of which 22 are employed in the overseas trades and 25 in the coastal and also employs several chartered ships to meet the requirements of trade. The overseas trades covered are :

India-U.K./Continent, India/U.S.A., India/U.S.S.R. (Black Sea ports) and India-West Africa/Mediterranean. (2) *India Steamship Company* of Calcutta is the second largest shipping company of India. Its fleet consists of 16 vessels. (3) *Great Eastern Shipping Co.* operates six ships in the tramp trades and ten in the coastal trade, including a tanker which has been chartered to the Stanvac Refinery. (4) *Bharat Line* operates eleven ships in the coastal, Burma and Persian Gulf trades. (5) *Malabar Steamship Co.*, has two ships operating in Persian Gulf trades. (6) *The Jayanti Shipping Co.* has purchased *Vikram Jayanti*, the biggest ship to fly an Indian flag. It is a 54,355-ton super oil tanker and can carry more than 52,000 tons of crude oil. It has been built by Mitsubishi Co. of Japan. (7) *Surendra Overseas*. (8) *Ratnakar Shipping Co.*

MERCHANT NAVY TRAINING—Side by side with the expansion of tonnage, steps have also been taken in several directions to augment training facilities for merchant navy personnel. There are today a comprehensive and well-knit system of pre-sea and post-sea technical training for merchant navy officers and pre-sea training for merchant navy ratings. Altogether there are six training institutions, all of which excepting 'Dufferin', have been established after independence.

Following are the training centres—(1) *T. S. Dufferin* (Pre-Sea Training Institution for Deck Officers). (2) *Directorate of Marine Engineering Training and Marine Engineering College*, Calcutta (Pre-Sea Training Institution for Marine Engineers). (3) *Nautical and Engineering College*, Bombay (Institution for Deck and Engineer Officers).

Preliminary Course for extra Master and extra first-class Engineer's Certificates—As a first step towards the ultimate objective of conducting examinations for 'extra' certificates in India, preparatory classes have been started. For Engineering Officers, the classes are being conducted in the D. M. & T., Calcutta and those for nautical officers are being held in the Nautical Engineering College, Bombay.

Rating Training Establishments—Three Rating Training Establishments, viz., *Trainingship Bhadra*, Calcutta; *Trainingship Mekhla*, Visakhapatnam and *Trainingship Nau Lakshi*, train seamen for employment both in the engine room and deck sides.

Recruitment of Seamen—Seamen's Employment Offices were set up at Bombay and Calcutta in 1954 and 1955 respectively, for regulating the supply of seamen on foreign-going ships on the principle of rotation.

Seamen's Welfare Offices have been set up at the ports of Bombay, Calcutta and Madras.

National Welfare Board for Seafarers was set up by the Government of India in 1955, *inter alia*, to advise the Government on the measures to be taken for promoting welfare of seamen etc.

SHIPYARDS—Ship-building in India was first started by Scindia Steam Navigation Company in 1919. On June 21, 1941, the foundation was laid at Visakhapatnam. The keel of the first ocean-going vessel of 8,000-tonner steamship, *Jala Usha* was laid in June 1946 and was launched in March 1948. This Visakhapatnam Shipyard was purchased by the Government from Scindias in March 1952. The management is entrusted to the Hindustan Shipyard (See also *Index*). The Shipyard's production capacity is

3 ships of modern design per year. So far the Shipyard has delivered 34 ocean-going ships, a mooring vessel and three small crafts aggregating to 2,80,000 D.W.T. The production of the Hindustan Shipyard fell in 1963-64. However, there was a net profit of Rs. 64,154 as against Rs. 36,752 in 1962-63.

During the year under review, the total production of the Shipyard, inclusive of ship construction, ship repairs and capital and other works executed departmentally, was valued at Rs. 475.05 lakhs as against Rs. 498.22 lakhs in 1962-63.

The Government of India advanced during the year a sum of Rs. 12.615 lakhs for financing the approved programme of yard development. Out of this, an amount of Rs. 12.61 lakhs had been converted into share capital by the issue and allotment of ordinary shares of the value of Rs. 1,000 each in favour of the President of India.

Second Shipyard—The most important development in the field of shipbuilding in this country has been the decision of the Government of India to establish a second shipbuilding yard at Cochin with an initial capacity to build ships totalling a G.R.T. of about 60,000 per year. The Government of India has signed an agreement with the Mitsubishi Co. of Japan to build the Cochin shipyard. The project is estimated to cost Rs. 8.6 crores, of which about \$ 6 million will be the foreign exchange components.

The *Ship Repairs Committee* appointed by the Government in 1959, stressed the responsibility of Port authorities in this matter and urged, among other things, the establishment of well-organised workshops in waterfront, provision for suitable repair berths in protected waters, better utilization of the dry docks in Visakhapatnam and Cochin.

LIGHTHOUSES AND LIGHTSHIPS—The *Department of Lighthouses and Lightships* is a self-supporting department and its accounts are maintained on a commercial basis. The revenue of the Department is derived from the light-dues levied on shipping under the provisions of the Indian Lighthouse Act, 1927. The Department of Lighthouses and Lightships is administered in association with a Central Advisory Committee for Lighthouses. A training centre to train young men for the specialised requirements of the Department was started in Calcutta in January, 1960. A modern and up-to-date lighthouse workshop and optical laboratory has been established at Calcutta.

PROGRESS OF SHIPPING

('000 GRT)

Type of vessels	1950-51	1955-56	1960-61	Nov. 1963	Nov. 1964
Coastal and adjacent ...	217	240	292	429	471
Overseas ...	174	240	613	784	916
	—	—	—	—	—
Total :	391	480	905	1213	1387

WORLD SHIPPING TONNAGE FIGURES, 1965.

Statistical tables published by Lloyd's Register of Shipping on October 13 gave the total of world merchant shipping as 160,391,504 tons (41,865 vessels) on July 1, 1965, compared with 152,999,621 tons (40,859 vessels) in July, 1964. The sizes of the principal national fleets (excluding ships under 100 tons, sailing ships, and barges) on July 1, 1965, are shown in the following table, with mid-1964 figures for comparison:—

	1965 (Gross Tons)	1964 (Gross Tons)
United Kingdom	21,530,264	21,489,948
United States	21,527,349*	22,430,249*
Liberia	17,539,462	14,549,645
Norway	15,641,498	14,477,112
Japan	11,971,157	10,813,228
Soviet Union	8,237,847†	6,957,512†
Greece	7,137,244	6,887,624
Italy	5,701,342	5,707,817
West Germany	5,279,493	5,159,186
France	5,198,435	5,116,232
Netherlands	4,891,041	5,110,022
Panama	4,465,407	4,269,462
Sweden	4,290,103	4,308,042
Denmark	2,561,599	2,431,020
British Commonwealth (excluding U. K., Canada, India, and Hong Kong)	2,298,629\$	1,962,511
Spain	2,132,002	2,047,715
Canada	1,829,741	1,823,387
India	1,522,693	1,448,237
Argentina	1,288,656	1,284,397
Brazil	1,252,968	1,271,108
Poland	1,039,966	988,382
Finland	1,009,486	964,275
Yugoslavia	990,846	966,521
Hong Kong	837,269	820,655
Belgium	831,976	796,133
Other Countries	9,385,031	8,919,201

* Including reserve fleet, estimated at 9,500,000 tons in 1965 (10,500,000 tons in 1964).

† Information incomplete.

\$ Comprising 726,999 tons in Australia, 399,703 tons in Pakistan, 254,412 tons in the Bahamas, 227,632 tons in New Zealand, 200,063 tons in Bermuda, 103,904 tons in Ghana, 67,502 tons in Nigeria, 54,740 tons in Malta, and 263,674 tons in other Commonwealth countries.

SCHEDULED CASTES & TRIBES

Backward Classes in India— There are certain classes of people in India who are known as *Scheduled Castes*, *Scheduled Tribes* and *Backward Classes*. Due to certain religious and social disabilities, they have an inferior status in Hindu society, which is now fast disappearing. Certain provisions of the Indian Constitution and also progressive socialistic ideas are helping to erase the social inequalities. The Constitution has prescribed protection and safeguard for the Scheduled Castes, Scheduled Tribes and backward classes under the following heads :

(a) Abolition of 'untouchability' and the forbidding of its practice in any form (*Art. 17*).

(b) Promotion of their education and economic interests and their protection from social injustice and all forms of exploitation (*Art. 46*).

(c) Opening of all Hindu religious institutions of a public nature to all classes of Hindus (*Art. 25*).

(d) Removal of any liability, disability, restriction or condition regarding access to schools, public restaurants, hotels etc., use of tanks, wells, roads, bathing ghats, etc., maintained wholly or partly out of State funds or dedicated to the use of the public (*Art. 15*).

(e) Right to practise any profession or carry on any occupation, trade, etc. (*Art. 19*).

(f) Stopping the denial of admission to educational institutions maintained by the State funds (*Art. 29*).

(g) State's obligation to consider their claims in the appointment of public services and reservation for them in case of insufficient representation (*Arts. 16 and 335*).

(h) Special representation in Parliament and State Legislatures for 20 years (*Arts. 330, 332 & 334*).

(i) Setting up of advisory councils and separate departments in the States and appointment of a special officer at the Centre (*Arts. 164, 338 and 5th Schedule*).

(j) Special provision for the administration and control of scheduled and tribal areas (*Art. 224 and 5th and 6th Schedules*).

Eradication of Untouchability— *The Untouchability (Offences) Act, 1955* came into force on June 1, 1955. This Act provides penalties for preventing a person, on the ground of untouchability, from entering a place of public worship, taking water from a sacred tank, well or spring and various other so-called untouchabilities. Several States have also passed similar untouchability laws. The Act also lays down penalties for refusing to sell goods or tender services to a *Harijan*, for molesting, injuring or annoying a person or organising boycott of, or taking any part in the excommunication of a person who has exercised the rights accruing to him as a result of the abolition of untouchability.

The Government of India have been giving financial support to the movement to eradicate untouchability.

Assistance and co-operation of the voluntary organisations, such as Harijan Sevak Sangh, Bharatiya Adimjati Sevak Sangh, Depressed Classes League, Servants of India Society etc., have also been obtained.

Autonomous Tribal Areas of Assam— In accordance with the provisions of the Sixth Schedule of the Constitution, one Regional Council and 5 District Councils have been set up in the districts of the United Khasi-Jaintia Hills, Garo Hills, Mizo Hills, North Cachar Hills and Mikir Hills. Each of these District Councils consists of not more than 24 members, three-fourths of them being elected by adult suffrage. The Councils possess wide legislative and rule-making powers as well as certain financial and taxation powers.

Tribes' Advisory Councils in other States— The Fifth Schedule of the Constitution provides for the setting up of a Tribes' Advisory Council in each State having Scheduled Areas and if the President so directs, for constituting such Councils in States which have Scheduled Tribes, but no Scheduled Areas. Tribes' Advisory Councils have so far been set up in Andhra Pradesh, Assam, Bihar, Gujarat, M.P., Maharashtra, Madras, Orissa, Punjab, Rajasthan and West Bengal. These Councils advise the Governors on the welfare of the Scheduled Tribes and the developments of Scheduled Areas. An advisory board in Kerala for the Scheduled Tribes and another in Mysore for the Scheduled Castes and Tribes have been set up to advise the respective State Governments on their welfare and advancement. Tribes Advisory Committees have also been formed in the Union Territories of Himachal Pradesh, Manipur, Tripura and Laccadive, Minicoy and Amindivi Islands.

A high-power official committee set up by the Union Government under the chairmanship of Mr. B. N. Lokur, has suggested in October 1965 that the special safeguards to Scheduled Castes and Scheduled Tribes be terminated by 1975.

Welfare and Advisory Agencies— (a) A *Commissioner for the Scheduled Castes and Scheduled Tribes* under Art. 338 of the Constitution has been appointed to investigate all matters relating to the safeguards for the Scheduled Castes and Scheduled Tribes and report to the President on the working of these safeguards. There are 10 Assistant Commissioners to assist the Commissioner.

A *Tribal Welfare Officer for Assam* has been appointed to take stock of and evaluate the work so far done among the tribal population.

Central Advisory Boards, one for Tribal Welfare and another for Harijan Welfare, have been constituted to associate members of Parliament and public workers with matters relating to the welfare of the Classes.

Welfare Departments in the States— Art. 164(1) of the Constitution requires that in the States of Bihar, Madhya Pradesh and Orissa, Welfare Departments in charge of a Minister should be set up. Welfare Departments have been set up in these States as well as in Andhra Pradesh, Assam, Gujarat, Rajasthan, Uttar Pradesh, West Bengal, Himachal Pradesh, Manipur and Tripura.

Representation in Legislatures— Under Articles 330, 332 and 334 of the Constitution, seats proportionate as far as possible to their population in the States, have been reserved for the Scheduled Castes and Tribes in the Lok Sabha and the State Assemblies for a period of 20 years from the passing of the Constitution.

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Representation in Services— $12\frac{1}{2}$ p.c. of the total vacancies for which recruitment is made by open competition on an all-India basis and $16\frac{3}{4}$ p.c. of the vacancies for which recruitment is made otherwise, are reserved for the Scheduled Castes. For the Scheduled Tribes, the reservation is 5 p.c. in both cases. There are also other concessions as regards age, qualifications, etc.

Scholarships and Grants— The Central Government's Scheme to award scholarships to deserving students from these classes for studies in foreign countries, came into force in 1953-54. $10\frac{1}{2}$ p.c. of the merit scholarships granted by the Centre for deserving students of the lower income groups and for students in institutions which are members of the Indian Public Schools Conference, are reserved for backward communities. Some of the State Governments offer similar scholarships.

Tribal Research Institutes have been set up in Bihar, Madhya Pradesh, Orissa, Rajasthan, West Bengal, Gujarat and Andhra Pradesh.

Economic Opportunities— Most of the tribal people practice shifting cultivation. The need for winding away the tribes from primitive forms of agriculture and setting them permanently on land are engaging the urgent attention of the Central and State Governments. The scheme for controlling the practice of shifting cultivation has been started in Assam, Andhra, Bihar, Madhya Pradesh, Manipur and Tripura. The other works undertaken are : (1) establishment of demonstration farms ; (2) colonisation schemes ; (3) resettlement of tribal families ; (4) reclamation of land ; (5) purchase of livestock fertilizers, agricultural implements, better seeds, etc. ; (6) digging of wells and tanks ; (7) development of cottage industries.

RESERVED SEATS FOR SCHEDULED CASTES & TRIBES IN PARLIAMENT & STATE LEGISLATURES

Parliament		Scheduled castes	Scheduled tribes	Parliament			Scheduled castes	Scheduled tribes
Andhra Pradesh	...	6	2	Orissa	...	...	4	4
Assam	...	1	2*	Punjab	...	...	5	—
Bihar	...	7	5	Rajasthan	...	...	3	2
Gujarat	...	1	3	Uttar Pradesh	...	...	18	—
Jammu & Kashmir	...	—	—	West Bengal	...	...	6	2
Kerala	...	2	—	Delhi	...	...	1	—
Madhya Pradesh	...	5	7	Himachal Pradesh	...	...	1	—
Madras	...	7	—	Manipur	...	...	—	1
Maharashtra	...	6	2	Tripura	...	...	—	1
Mysore	...	3	—					
						Total :	76	31

* One seat is reserved for the Autonomous Districts in Assam.

<i>State Legislature</i>	<i>Scheduled castes</i>	<i>Scheduled tribes</i>	<i>State Legislature</i>	<i>Scheduled castes</i>	<i>Scheduled tribes</i>
Andhra Pradesh	... 43	11	Mysore	... 28	1
Assam	... 5	23	Orissa	... 25	29
Bihar	... 40	32	Punjab	... 33	—
Gujarat	... 11	21	Rajasthan	... 28	20
Jammu & Kashmir	... —	—	Uttar Pradesh	... 89	—
Kerala	... 11	1	West Bengal	... 45	15
Madhya Pradesh	... 43	54			
Madras	... 37	1			
Maharashtra	... 33	14			
			Total :	471	222

SCHEDULED CASTES AND SCHEDULED TRIBES IN INDIA (According to 1961 census)

	<i>Scheduled castes</i>	<i>Scheduled tribes</i>
INDIA	64,511,313	29,883,470
<i>States</i>		
Andhra Pradesh	4,973,616	1,324,368
Assam	732,756	2,068,364
Bihar	6,536,875	4,204,770
Gujarat	1,367,255	2,754,446
Jammu & Kashmir	268,530	—
Kerala	1,422,057	207,996
Madhya Pradesh	4,253,024	6,678,410
Madras	6,072,536	252,646
Maharashtra	2,226,914	2,397,159
Mysore	3,117,232	192,096
Nagaland	126	343,697
Orissa	2,763,858	4,223,757
Punjab	4,139,106	14,132
Rajasthan	3,359,640	2,309,447
Uttar Pradesh	15,417,245	—
West Bengal	6,950,726	2,063,883
<i>Territories</i>		
A. & N. Islands	—	14,122
Dadra & Nagar Haveli	985	51,261
Delhi	341,555	—
Himachal Pradesh	369,916	108,194
L. M. & A. Islands	—	23,391
Manipur	13,376	249,094
NEFA	—	5,042
Pondicherry	56,861	—
Tripura	119,725	360,070

ELECTIONS

ALLOCATION OF SEATS : RAJYA SABHA

ALLOCATION OF SEATS : RURAL SECTORS				Total	Seats	
		Total		Seats		
Andhra Pradesh	...	...	18	Punjab	...	11
Assam	...	...	7	Rajasthan	...	10
Bihar	...	...	22	Uttar Pradesh	...	34
Gujarat	...	...	11	West Bengal	...	16
Jammu & Kashmir	...	...	4	Delhi	...	8
Kerala	...	...	9	Himachal Pradesh	...	2
Madhya Pradesh	...	...	16	Manipur	...	1
Madras	...	...	18	Pondicherry	...	1
Maharashtra	...	...	19	Tripura	...	1
Mysore	...	...	12			
Nagaland	...	...	1	Total	...	224
Orissa	...	...	10			

ALLOCATION OF SEATS : LOK SABHA

ALLOCATION OF SEATS : FOR SCHEDULED CASTES				Total Seats		
			Total Seats	Total Seats		
Andhra Pradesh	...	...	43	West Bengal	...	1
Assam	...	...	12	Andaman & Nicobar Is.	...	1
Bihar	...	...	53	Dadra & Nagar Haveli	...	1
Gujarat	...	...	22	Delhi	...	5
Jammu & Kashmir	...	...	6	Himachal Pradesh	...	4
Kerala	...	...	18	Goa, Daman & Diu	...	2
Madhya Pradesh	...	...	36	Manipur	...	2
Madras	...	...	41	Pondicherry	...	1
Maharashtra	...	...	44	Tripura	...	2
Mysore	...	...	26	Laccadive, Minicoy &		
Nagaland	...	...	1	Amindivi Islands	...	1
Orissa	...	...	20	NEFA	...	1
Punjab	...	...	22	Anglo-Indians	...	2
Rajasthan	...	...	22			
Uttar Pradesh	...	...	86			
				Total	...	507

STATE SEATS IN LEGISLATIVE ASSEMBLIES

(As per revision by the Delimitation Commission for the next General Election)

The strength is increased in ten States, remains the same in 2 States—Bihar and Orissa, and is slightly reduced in 2 other States—U.P. and Andhra. The new allotment, including the reserved seats, is as follows :

		Total Seats	Seats for Scheduled Castes	Seats for Scheduled Tribes
Andhra Pradesh	...	300	43	11
Assam	...	105	5	3
Bihar	...	318	40	32
Gujarat	...	154	11	21
Jammu & Kashmir	...	75	—	21
Kerala	...	126	11	1
Madhya Pradesh	...	288	43	54
Madras	...	206	37	1
Maharashtra	...	264	33	14
Mysore	...	208	28	1
Punjab	...	154	33	—
Rajasthan	...	176	28	20
Orissa	...	140	25	29
U.P.	...	430	89	—
West Bengal	...	252	45	15

In Assam, 16 seats are reserved for the autonomous districts : 5 for the Khasi and Jaintia Hills, 4 for Garo Hills, 3 for Mizo Hills, one for North Cachar Hills, and 3 for Mikir Hills.

Under the Delimitation Commission Act, the total number of seats of a State Assembly has to be an integral multiple of the number of seats in the Lok Sabha allotted to that State.

These multiples at present are : U.P. and Madras : 5, Bihar and Maharashtra : 6, Andhra, West Bengal, Gujarat, Punjab, Orissa and Kerala : 7, Madhya Pradesh, Mysore and Rajasthan : 8, and Assam 9.

The Commission has decided to maintain the existing multiples in all States except Madras. The Madras Assembly has at present only 206 seats. In view of the fact that its quota in the Lok Sabha will in future be reduced from 41 to 39, the Commission has increased its 'multiple' from 5 to 6 and assigned 234 seats to its Assembly.

The Commission has already increased the seats allotted to the 14 States in the Lok Sabha from 481 to 490. The new distribution, as already announced, is : U.P. : 85, Bihar : 53, Maharashtra : 45, Andhra : 41, West Bengal : 40, Madras : 39, M.P. : 37, Mysore : 27, Gujarat : 24, Punjab : 23, Rajasthan : 23, Orissa : 20, Kerala : 19 and Assam : 14.

The Delimitation Commission has been set up for revision of the fresh number of memberships of Assemblies, Councils and Parliament according to 1961 census.

SEATS OF LEGISLATIVE COUNCILS

No. of				No. of			
Seats				Seats			
Andhra Pradesh	...	...	90	Mysore	...	...	63
Bihar	...	...	96	Punjab	...	...	51
Jammu & Kashmir	...	...	36	Uttar Pradesh	...	...	108
Madhya Pradesh	...	...	90	West Bengal	...	...	75
Madras	...	...	63				
Maharashtra	...	...	78	Total	...	...	750

PARTY POSITION IN LOK SABHA

(As on December 31, 1964)

					Lok Sabha	Rajya Sabha
Congress	...	...	...	...	374	178
Swatantra	...	...	...	...	27	13
Communist	...	...	...	...	16	6
Samyukta Socialist	...	...	...	...	16	8
Jan Sangh	...	...	...	...	13	4
Communist Group (Marxist Leninist)	...	...	...	...	12	4
Independent Parliamentary Group	...	...	...	...	8	—
Dravida Munnetra Kazhagam	...	...	...	...	8	1
U.P.P.C.	...	...	...	...	9	—
Republican	...	...	...	...	2	1
Muslim League	...	...	...	...	2	2
Nirdaliya Dal	...	...	...	...	4	—
Peasants' and Workers' Party	...	...	...	...	—	2
Jharkhand Party	...	...	...	...	—	1
Independents	...	...	...	...	15	14
Vacancies	...	...	...	...	3	4
TOTAL					509*	238

STATE ASSEMBLY ELECTIONS, 1964

States	No. of Seats	Congress	Communists	PSP	Jan Sangh	Swatantra	Ind. & other Parties	Socialist	Total
Andhra	301	215	51	...	...	18	47	2	333
Assam	105	79	...	6	...	...	20	...	105
Bihar	318	183	12	29	4	50	32	7	317
Gujarat	154	112	...	7	...	26	8	...	153
Jammu & Kashmir	75	...	...	...	...	...	75	...	75
Kerala	126	64	30	18	...	...	14	...	126
M. P.	288	144	1	33	38	2	53	14	285
Madras	206	138	2	...	...	6	59	1	206
Maharashtra	264	210	6	10	...	...	34	1	261
Mysore	208	137	3	21	...	9	37	1	208
Nagaland	46	...	...	...	...	...	46	...	46
Orissa	140	80	4	11	...	...	45	...	140
Punjab	154	90	9	...	8	3	38	4	152
Rajasthan	176	88	5	2	14	36	24	5	174

* Excluding the Speaker.

States	No. of Seats	Congress	Communists	PSP	Jan Sangh	Swatantra	Ind. & other Parties	Total	Socialist
U. P.	430	248	14	38	48	15	41	24	428
W. Bengal	252	157	50	5	...	...	40	...	252
<i>Territories</i>									
Goa, Daman & Diu	30	1	...	...	...	...	29	...	30
Himachal Pradesh	41	33	1	...	...	4	3	...	41
Manipur	30	22	...	...	...	...	5	3	30
Pondicherry	39	23	...	1	...	...	15	...	39
Tripura	30	17	13	...	...	...	...	...	30

Other Parties in State Assemblies: Bihar—Jharkhand; Jammu & Kashmir—National Conference, Praja Parishad; Kerala—Muslim League; Madhya Pradesh—Akhil Bhartiya Ram Rajya Parishad, Hindu Maharashtra; Madras—Dravida Munnetra Kazhagam, Forward Bloc; Maharashtra—Peasants' and Workers' Party, Republican; Orissa—Ganatantra Parishad; Punjab—Akali Dal; Rajasthan—Ram Rajya Parishad; Uttar Pradesh—Hindu Mahasabha, Republican; West Bengal—Forward Bloc, Revolutionary Socialist Party.

FILM SECTION

PROGRESS OF CINEMA IN INDIA—Cinema first came to India on July 7, 1896, when a team of Lumiere agents began public showing of cinematograph films at Watson's Hotel, Bombay and one week later at the Novelty Theatre. About the same time, one Mr. Stevens started exhibiting motion picture shorts on the board of Star Theatre at Calcutta. Hiralal Sen, a Bengali enthusiast, took interest in the exhibition as well as production of motion pictures and bringing necessary equipment from England. He started showing them by 1898, and by 1901, he successfully produced several motion picture shorts depicting scenes from popular Bengali dramas and these were regularly screened at the Classic Theatre, Calcutta. Credit of producing the first feature film in India, *Rajah Harischandra*, 3700 ft. long, goes to Dhundiraj Govind Phalke, more popularly known as Dadasaheb Phalke. The picture opened at the Coronation Cinema in Bombay in April 1913. Since that time onwards, the cinema industry in India has been making steady progress. While in Bombay, Hindusthan, Imperial and Kohinoor Film Cos. were the major film-producing concerns, in Calcutta Madan Theatres Ltd. reigned supreme in the silent days not only as producers but also as the exhibitors of films, having a chain of no less than 172 houses all over India, Burma and Ceylon.

At first India was content to see only foreign films mainly imported by Pathe-India established in Bombay as early as 1907; but soon, from 1913 onwards, indigenous films began to be produced at both Calcutta and Bombay and in 1926-27, 15% of the feature films released in India were Indian, while 85% were foreign, mostly American. This position changed substantially in 1930-31, when the percentage rose to 50-50.

India first produced its talkie, *Alam Ara* of the Imperial Film Co., Bombay in 1930. By 1935, the conversion of silent era in India to talkies was complete. Today, India is the second largest producer of films in the world; but so far as quality is concerned, she still lags behind many countries. Since 1955, through the production of several outstanding pictures, which won laurels in various International Film Festivals, India got recognition in the world market as the maker of quality films.

FILM PRODUCTION—India now produces, on an average, 320 films a year. Bombay, Calcutta and Madras are the three main centres of film production in India. Over 50 p.c. of the pictures are produced at Bombay; the share of Calcutta and Madras varies from 20 to 25 p.c. The number of processing laboratories in operation was 39 in 1963. There are at present 10 film studios at Calcutta, 19 at Bombay and 26 in South India, of which 16 are situated at Madras City. The number of cinema houses at the end of 1965 was 5,295.

The capital investments in production, exhibition and processing of films in India are estimated at Rs. 85 crores. The estimated gross annual income from box-office collections is Rs. 59 crores. The earnings from the exports of Indian films average Rs. 160 lakhs. More than 1,22,000 persons are employed in film industry—20,000 in studios, laboratories and production, 10,000 in distribution, 82,000 in exhibition (including the cinema-house employees) and 10,000 in allied trades, such as publicity, supplies etc. According to an official survey, this industry is second in India among the medium-sized industries in respect of capital investment, fourth from the point of view of wages paid and fifth in the number of people employed.

According to U.N. Statistical Year-Book, 1964, India was the second in turning out the largest number of long films. With 319 films, it followed Japan's 657. The Year-Book says that the Chinese are the most avid cinemagoers, with an attendance of 4,000 million in 1963, followed by Soviet Union (3,849 million), the U.S. (2,178 million) and India (1,000 million).

Language difficulties have always been a major problem in India. But pictures are generally produced in Hindi, Bengali, Tamil and Telugu, Marathi and Gujarati. A handful of Punjabi, Bhojpuri, Oriya and Assamese pictures are also produced nowadays. Hindi pictures are mostly produced in Bombay; Bengali films are made in Calcutta.

GOVERNMENT OF INDIA'S CONTROL—The Ministry of Information and Broadcasting controls everything concerning films in India including Films Division of the Central Government.

Films Division—It is a branch of the Ministry of Information and Broadcasting with its headquarters at Malabar Hill, Bombay. It consists of the following 5 distinct sections—*Documentary Section, Newsreel Sec-*

tion, Distribution Section, Public Relations Section and Administrative Section.

The main function of the Films Division is the production of documentary films and newsreels for general information and education of the people. Till the end of 1964, the Division released 845 newsreels and 731 short films for exhibition in cinema-houses. The Division produces today nearly 170 films per year. These include newsreels, documentaries, educational and scientific films. Short films and newsreels are released in 13 languages, viz., English, Hindi, Bengali, Gujarati, Marathi, Punjabi, Assamese, Kannada, Urdu, Oriya, Tamil, Telugu and Malayalam.

Every cinema is required under the terms of its licence to exhibit at each performance, not more than 2,000 ft. of films approved by the authorities as documentary films, films of scientific and educational value or films dealing with news and current events. These are supplied by the Films Division on payment of rental not exceeding one p.c. of the average weekly net collections. The Division also makes regular arrangements for exhibiting its documentaries in cinema houses and on television in some foreign countries.

CHILDREN'S FILMS— The Government of India is taking special interest in the production of children's films. For this purpose, a *Children's Film Society* was registered in May 1955, to undertake, aid, sponsor, promote and co-ordinate the production, distribution and exhibition of films, specially suitable for children and adolescents. The Society receives an annual grant-in-aid from the Central Government for the production of children's films. State Committees have also been formed in a number of States to spread the children's film movement. The Annual Report of the Ministry of Information and Broadcasting for the year 1964-65 states that 20 feature films and 18 short films and 178 language versions were produced by the Society since its inception. The Society's film "Jaaldeep" was adjudged the best children's film at the 9th International Exhibition of Films for Children at Venice in 1957.

FILM ADVISORY BOARD— The Government had constituted in 1946, a *Film Advisory Board* which recommends documentaries and newsreels produced by the Films Division and by other private producers for certifying them as "approved films." It also acts as an advisory body to the Films Division for the production of documentaries.

FILM CONSULTATIVE COMMITTEE— The Government had set up in 1962, a *Film Consultative Committee* to bring about closer liaison between the Government and the film industry on matters of common interest and to advise the Government on matters affecting the film industry and its future development.

PANEL FOR CINEMA EQUIPMENT— In February 1962, the Government constituted a Panel for Cinema and Studio Equipment with the Industrial Adviser, Development Wing, Ministry of Commerce and Industry as Chairman and 16 members. The Panel advises the Government on special measures necessary for the planning, development and manufacture of cinema equipment including theatre, studio and film-processing equipment.

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CENSORSHIP OF FILMS—The *Central Board of Film Censors* is a statutory body constituted in 1951, for sanctioning films for public exhibition throughout India. The Board, appointed by the Government of India, at present consists of a Chairman and 9 non-official members. The head office of the Board is at Bombay and its 3 regional offices are at Bombay, Calcutta and Madras. Every film is viewed initially by an *Examining Committee* consisting of a Regional Officer and the members of the Advisory Panels, constituted at Bombay, Calcutta and Madras. The Board may refuse a certificate for public exhibition of any film on the recommendations of the Examining Committee, or grant it with or without cuts or modifications to be carried out in the film. Where the decision of the Examining Committee is not acceptable to the applicant concerned, he may ask for its reconsideration by a *Revising Committee*. A film may also be referred to the Revising Committee by the Chairman on his own initiative. Finally, an appeal against the decision of the Board may be made to the Central Government.

Certificates for unrestricted public exhibition are called 'Universal' certificates and bear a 'U' mark. Films restricted to adults only, i.e., persons above the age of 18 years, are given 'Adult' certificates which bear an 'A' mark. If any portion of a film is excised, a triangular mark is put at the left-hand bottom corner of the certificate given to it.

During 1964, the Board examined 4,915 films out of which 29 films were referred to the Revising Committees. The Board granted 2,975 "U" certificates and 228 "A" certificates in respect of foreign films. The corresponding figures for Indian Films were 1,926 and 11. The number of films which were refused certificate was 77, all of which were foreign. 312 feature films produced in India were certified for public exhibition by the Board. In all, 270 films have been censored till Nov. 30, 1965.

TAXATION—The film industry is now under the various Central Government and State Government taxes. Also there are import duties on cinema equipment, rentals on Government-approved films the showing of which is compulsory, fees for censorship of films, income-tax, taxes by States as entertainment tax, sales tax, licence fee for operating cinemas and storage of films, property-tax, octroi duty and terminal tax, taxes on the display of posters and other advertisements, etc., etc.

FILM FEDERATION OF INDIA—This has been established to promote commerce in general and in particular, to promote, protect and watch over the interests of the Indian film industry and persons thereof; to regulate their method of doing business; to maintain uniformity in rules, regulations and usages of the film industry; to settle disputes by arbitration or otherwise; to take all steps for promoting, supporting or opposing legislation or executive action affecting the economic interest of the film industry.

NATIONAL FILM ARCHIVE OF INDIA—was set up in February 1964. At present, it is a small unit functioning from a modest little office and vaults housed in the premises of the Film Institute of India at Poona. An Advisory Committee of 5 members has been formed to advise the Central Government on matters relating to the Archive. Various State

Award-winning films have been sent for preservation to the Archive. It has been affiliated to the International Federation of Film Archives through which more than 40 Archives in different film-producing countries of the world collaborate with each other.

STATE AWARDS FOR FILMS— State Film Awards were instituted in 1954 to encourage the production of films of good quality and standard. Apart from the Certificates of Merit on an all-India and regional basis, cash awards are given to the producers and directors of the Award-winning films.

FILM FINANCE CORPORATION— was set up with headquarters at Bombay on March 20, 1960, with an authorised capital of Rs. 1 crore of which Rs. 50 lakhs was issued and wholly subscribed by the Central Govt. The main object of the Corporation is to assist the film industry by providing finance at a reasonable rate of interest for raising the standard of films produced. The loans are generally given upto Rs. 3.5 lakhs per film at an interest of 9 p.c., subject to a rebate of 2 p.c. for prompt and regular repayments. In order to ensure a high standard of films, the Corporation has the right to examine scripts before sanctioning loans. In no case, the Corporation will finance the entire expenditure of a film, although the assistance may cover 60 or 70 p.c. of the total cost. The Corporation had disbursed loans totalling Rs. 95,37,375 till October 31, 1965, out of the sanctioned loans amounting to Rs. 1,36,47,067.

FILM INSTITUTE OF INDIA— commenced functioning at Poona on March 20, 1961; and was set up in pursuance of the recommendations of the Film Enquiry Committee. The main functions of the Institute are : (i) to impart training in technical subjects related to films, (ii) awarding of diplomas to successful trainees, (iii) co-ordination of schemes for training film technicians in India, and (iv) maintenance of a library of important films produced in India and abroad. The Institute also offers regular courses of two and three years' duration in 6 subjects, namely, advanced direction, film acting, script-writing, motion picture photography, sound recording and sound engineering, and film editing. The Institute has its own processing laboratory and makes available studio facilities to suitable outside producers.

EXPORT OF INDIAN FILMS— An *Export Promotion Committee for Films*, with headquarters in New Delhi, has been constituted with the object of suggesting ways and means for promoting exports of Indian films.

Indian Motion Pictures Export Corporation Ltd.— The main objective of the Corporation is to expand the exports of Indian films to the traditional markets and also to introduce them to the new markets of Europe and America. The Corporation was registered on September 19, 1963. Its authorised share capital has been raised to Rs. 25 lakhs. The Corporation has established sub-committees at Bombay, Calcutta and Madras.

IMPORT OF FOREIGN FILMS— Notwithstanding the high rate of domestic production, India continues to be an importer of foreign films. The imports are regulated through quota licences issued to established importers. The Government of India have also entered into special

arrangements with the Rank Film Distributor of India Ltd. of U.K. and the Motion Picture Export Association of U.S.A. to import films from U.K. and U.S.A.

INDIAN FILMS IN FOREIGN COUNTRIES— Indian film industry is making a steady progress in some countries outside India. A good market for Indian films has been created in the Middle East, in South-East Asia and in some African countries. These films are also helping to earn foreign exchange. Not only this, some feature films have won laurels in the Film Festivals held in different years at different places outside India. A list of these outstanding films is given below :—

<i>Title of the Film</i>	<i>Name of the Festival</i>	<i>Year</i>
NICHA NAGAR (Hindi)	1st International Film Festival, Cannes (Grand Prix)	1947
KALPANA (Hindi)	2nd World Festival of Films and Fine Arts of Belgium.	1949
AMAR BHOOPALI (Marathi)	5th International Film Festival, Cannes	1952
BABLA (Bengali)	7th International Film Festival, Karlovy Vary.	1952
DO BIGHA ZAMIN (Hindi)	7th International Film Festival, Cannes.	1954
PATHER PANCHALI (Bengali)	9th International Film Festival, Cannes.	1956
Do	Edinburgh Film Festival	1956
Do	Manila Film Festival.	1956
Do	International Film Exhibition, San Francisco.	1957
Do	International Film Festival, Vancouver (Canada).	1958
Do	2nd Stratford International Film Festival, Canada.	1958
Do	Afro Arts Theatre, New York.	1959
BANDISH (Hindi)	Damascus Film Festival.	1956
KABULIWALA (Bengali)	7th International Film Festival, Berlin.	1957
JAGTE RAHO (Hindi)	10th Jubilee International Film Festival, Karlovy Vary (Grand Prix)	1957
APARAJITO (Bengali)	18th International Art Exhibition, Venice (Golden Lion of St. Mark)	1957
Do	International Film Festival, San Francisco (Best Direction—Satyajit Roy).	1958
Do	U. S. A.	1958 & 1959
JALDEEP (Hindi)	9th International Exhibition of Films for Children, Venice,	1957

<i>Title of the Film</i>	<i>Name of the Festival</i>	<i>Year</i>
DO ANKHEN BARAH HAATH (Hindi)	8th International Film Festival, Berlin.	1958
Do	U. S. A.	1958
MOTHER INDIA (Hindi)	11th International Film Festival, Karlovy Vary (Best Actress— Nargis).	1958
JALSAGHAR (Bengali)	Moscow International Film Festival.	1959
APUR SANSAR (Bengali)	London Film Festival	1960
Do	14th International Film Festival, Edinburgh	1960
Do	U. S. A.	1960
VEERAPANDIYA KATTABOMMAN (Tamil)	Afro-Asian Festival, Cairo.	1960
HEERA MOTI (Hindi)	13th International Film Festival, Karlovy Vary.	1962
TWO DAUGHTERS (SAMAPTI & POSTMASTER) (Bengali)	11th Melbourne Film Festival	1962
Do	Berlin Film Festival.	1963
GUNGA JUMNA (Hindi)	13th International Film Festival, Karlovy Vary.	1962
SAT PAKE BANDHA (Bengali)	Moscow International Film Festival (Best Actress—Suchitra Sen)	1963
SHEHAR AUR SAPNA	14th International Film Festival, Karlovy Vary	1964
MAHANAGAR (Bengali)	Berlin Film Festival	1964
CHARULATA (Bengali)	Berlin Film Festival (Best Direction—Satyajit Ray).	1964
SHAKESPEARE-WALAH (Hindi)	Berlin Film Festival (Best Actress—Madhur Jaffrey).	1965

GOLD MEDALS FOR INDIAN FILMS

1953—SHYAMCHI AI (P. K. Atré— Marathi).	1959—APUR SANSAR (Satyajit Ray— Bengali).
1954—MIRZA GHALIB (Sohrab Modi— Hindi).	1960—ANURADHA (Hrishikesh Muk- herjee—Hindi).
1955—PATHER PANCHALI (Satyajit Ray—Bengali).	1961—SISTER NIVEDITA (Bejoy Bose —Bengali).
1956—KABULIWALA (Tapan Sinha— Bengali).	1962—DADA THAKUR (Sudhir Muk- herjee—Bengali).
1957—DO ANKHEN BARA HAATH (V. Santaram—Hindi).	1963—SHEHAR AUR SAPNA (K. A. Abbās—Hindi).
1958—SAGAR SANGAMME (Debaki Kr. Bose—Bengali).	1964—CHARULATA (Satyajit Ray— Bengali).

INDIAN FEATURE FILMS, 1960-64

		1960	1961	1962	1963	1964
Assamese	...	—	2	2	3	1
Bengali	...	38	36	37	39	34
English	...	1	—	—	3	1
Gujarati	...	2	7	4	6	3
Hindi *	...	123	103	94	93	113
Kannada	...	12	12	16	22	18
Kashmiri	...	—	—	—	—	1
Konkani	...	—	—	—	1	—
Malayalam	...	6	11	15	13	19
Marathi	...	15	15	21	16	18
Oriya	...	5	2	6	2	3
Punjabi	...	4	5	5	5	8
Rajasthani	...	—	1	—	—	—
Sindhi	...	1	—	—	—	—
Tamil	...	63	49	59	56	44
Telugu	...	54	55	48	46	41
Total	...	324	303	307	305	304

In addition, the Central Board of Film Censors certified a total of 811 short films for public exhibition during 1964.

IMPORT OF CINEMA FILMS AND EQUIPMENT

(In lakhs of Rs.)

Raw Film			Exposed Film			
	Metres (lakhs)	Value (Rs. lakhs)	Metres (lakhs)	Value (Rs. lakhs)	Sound record- ing equipment (Rs. lakhs)	Projection equipment (Rs. lakhs)
1958	653.10	164.06	33.87	32.23	5.46	39.45
1959	649.84	277.32	40.82	38.58	2.17	24.32
1960	827.25	194.33	50.90	37.73	1.41	32.43
1961	537.19	165.47	51.49	44.79	3.76	34.52
1962	722.35	177.18	55.95	44.29	2.95	33.08
1963	807.09	204.02	27.95	27.28	2.09	31.03

IMPORTANT FILM DATES IN INDIA

- 1896 First exhibition of cinema in India by Lumiere Brothers on July 7.
- 1901 First film production in India by Hiralal Sen (Royal Bioscope Co.) at Calcutta with a series of shorts shown in Bengali theatres.
- 1907 First cinema house opened in Calcutta by J. F. Madan.

* Includes Urdu, Bhojpuri, Rajasthani etc.

- 1913 Second Indian film, *Harischandra*, produced and released by Dadasaheb Phalke at Bombay in April.
- 1917 First Indian film produced in Bengal is *Nala Damayanti* by J. F. Madan.
- 1918 Indian Cinematograph Act passed.
- 1920 Censorship of films started at Calcutta, Bombay and Madras.
- 1921 First picture produced in South India is *Bhishma Pratigna* by Star of the East Film Co.
- 1922 Entertainment Tax introduced in Bengal.
- 1927 Government of India appointed a Cinematograph Enquiry Committee.
- 1929 First talkie in India, Universal's *Melody of Love* shown at Elphinstone Picture Palace, Calcutta.
- 1930 *Alam Ara*, the first Indian talkie by Imperial Film Co. of Bombay, released on March 14. The second talkie, *Shirin Farhad* produced by Madan Theatre, Ltd., Calcutta.
- 1931 Probhat Studio's *Sairendhri* is the first Indian coloured film, though coloured in Germany. Imperial's *Krishan Kanya* is the first cine-coloured picture done in India. *Kanya* is the first Indo-English film (talkie) by Himangsu Rai, the founder of Bombay Talkies, but produced mainly in England.
- 1932 Background music introduced for the first time in *Chandidas*, a Bengali film.
- 1934 Playback system introduced for the first time in *Bhagyachakra*, a Bengali film.
- 1939 Silver Jubilee of the Film Industry in India.
- 1940 *Court Dancer* is the first Indo-English talkie made in India.
- 1943 Information Films of India set up by the Government of India.
- 1949 Appointment of the Film Enquiry Committee by the Government of India.
- 1951 Establishment of the Central Board of Film Censors at Bombay on January 15.
- 1952 First International Film Festival held in Delhi on January 24.
- 1954 State Films Awards inaugurated by the Government of India.
- 1956 Silver Jubilee of Indian talkie celebrated.
- 1960 First coloured cartoon film for children produced by the Films Division, *Banyan Tree* released on May 20; Film Finance Corporation set up at Bombay on March 20.
- 1961 Second International Film Festival opened at Delhi in October.
- 1965 Third International Film Festival held at Delhi, Calcutta and Madras in January.

ACADEMY AWARDS

'Oscar' is the supreme annual award of the *American Academy of Motion Picture Arts and Sciences*. These coveted Statuettes were first presented on 26th May, 1929, to the leading men and women in various branches of picture-making industry. A list of the Award-winners since the inception is given below :

	Film of the Year	Actor of the Year	Actress of the Year
1928	<i>Wings</i> (Paramount)	Emil Jennings	Janet Gavnor
1929	<i>Broadway Melody</i> (M.G.M.)	Warner Baxter	Mary Pickford

1930	All Quiet on the Western Front (<i>Universal</i>).	George Arliss	Norma Shearer
1931	Cimarron (<i>R.K.O.</i>)	Lionel Barrymore	Marie Dressler
1932	Grand Hotel (<i>M.G.M.</i>)	Fredric March	Helen Hayes
1933	Cavalcade (<i>Fox</i>)	Charles Laughton	Katherine Hepburn
1934	It Happened One Night (<i>Columbia</i>)	Clark Gable	Claudette Colbert
1935	Mutiny on the Bounty (<i>M.G.M.</i>)	Victor McLaglen	Bette Davies
1936	Great Ziegfeld (<i>M.G.M.</i>)	Paul Muni	Luise Rainer
1937	Life on Emile Zola (<i>Warner</i>)	Spencer Tracy	Luise Rainer
1938	You Can't take It With You (<i>Columbia</i>)	Spencer Tracy	Bette Davies
1939	Gone with the Wind (<i>Selznick</i>)	Robert Donat	Vivien Leigh
1940	Rebecca (<i>Selznick</i>)	James Stewart	Ginger Rogers
1941	How Green Was My Valley (<i>20th Century Fox</i>)	Gary Cooper	Joan Fontaine
1942	Mrs. Miniver (<i>M.G.M.</i>)	James Cagney	Greer Garson
1943	Casablanca (<i>Warner</i>)	Paul Lukas	Jennifer Jones
1944	Going My Way (<i>Paramount</i>)	Bing Crosby	Ingrid Bergman
1945	Lost Week End (<i>Paramount</i>)	Ray Milland	Joan Crawford
1946	Best Years of Our Lives (<i>R.K.O.</i>)	Frederic March	Olivia de Havilland
1947	Gentleman's Agreement (<i>20th Century Fox</i>)	Ronald Colman	Loretta Young
1948	Hamlet (<i>Arthur Rank</i>)	Sir L. Olivier	Jane Wyman
1949	All the King's Men (<i>Columbia</i>)	Broderick Crawford	Olivia de Havilland
1950	All About Eve (<i>20th Century Fox</i>)	Jose Ferrer	Judy Holliday
1951	An American in Paris (<i>M.G.M.</i>)	Humphrey Bogart	Vivien Leigh
1952	Greatest Show on Earth (<i>Paramount</i>)	Gary Cooper	Shirley Booth
1953	From Here to Eternity (<i>Columbia</i>)	William Holden	Audrey Hepburn
1954	On the Waterfront (<i>Columbia</i>)	Marlon Brando	Grace Kelly
1955	Marty (<i>United Artists</i>)	Ernest Borgnine	Anna Magnani
1956	Around the World in 80 Days (<i>Michael Todd Co. Inc.</i>)	Yul Brynner	Ingrid Bergman
1957	The Bridge on the River Kwai (<i>Columbia</i>)	Alec Guinness	Joanne Woodward
1958	Gigi (<i>M.G.M.</i>)	David Niven	Susan Hayward
1959	Ben Hur (<i>M.G.M.</i>)	Charlton Heston	Simone Signoret
1960	Apartment (<i>United Artists</i>)	Burt Lancaster	Elizabeth Taylor

1961	West Side Story (United Artists)	Maximilian Schell	Sophia Loren
1962	Lawrence of Arabia (Columbia)	Gregory Peck	Anne Bancroft
1963	Tom Jones (United Artists)	Sydney Poitier	Patricia Neal
1964	My Fair Lady (Warner Bros.)	Rex Harrison	Julie Andrews

OSCAR AWARDS, 1964

- Best Film—"MY FAIR LADY" (Warner Brothers).
 Best Actor—Rex Harrison in "MY FAIR LADY."
 Best Actress—Miss Julie Andrews in "MARY POPPINS".
 Best Director—George Cukor for "MY FAIR LADY".
 Best Supporting Actress—Miss Lila Kedrova in "ZORBA THE GREEK."
 Best Supporting Actor—Peter Ustinov in "TOPKAPI."
 Best Foreign Film—"YESTERDAY, TODAY AND TOMORROW" (Italy).

MOSCOW INTERNATIONAL FILM FESTIVAL, 1965

- Grand Prize—"TWENTY HOURS" (Hungary) and "WAR AND PIECE" (USSR).
 Second Prize—"CE CIEL SUR LA TETE" (France) and "THE ASSAULT" (Czechoslovakia).
 Silver Medal—"THE GREAT RACE" (USA).
 Special Prize—"LA SOLDATESSE" (Italy).
 Best Actor—Sergo Takariadze (USSR) in "FATHER OF A SOLDIER".
 Best Actress—Sophia Loren (Italy) in "MARRIAGE, ITALIAN STYLE".

CANNES INTERNATIONAL FILM FESTIVAL, 1965

- Palme d'Or : "THE KNACK" (Great Britain).
 Special Jury Prize : "KWAIDAN" (Japan).
 Best Actor : Terence Stamp in "THE COLLECTOR" (U.S.A.).
 Best Actress : Samantha Eggar in "THE COLLECTOR" (U.S.A.).
 Best Direction : Liviu Ciulei for "THE FOREST OF HANGED MEN" (Rumania).

BERLIN FILM FESTIVAL, 1965

- Golden Bear (features) : "ALPHAVILLE" (France).
 Silver Bears : "LE BONHEUR" (France); "REPULSION" (Great Britain).
 Best Actor : Lee Marvin in "CAT BALLOU" (U.S.A.).
 Best Actress : Madhur Jaffrey in "SHAKESPEARE-WALLAH" (India).
 Best Direction : Satyajit Ray for "CHARULATA" (India).

VENICE FILM FESTIVAL, 1965

- Golden Lion—"VAGHE STELLE DELL ORSA" by Luchini Visconti (Italy).
 Best Actor (Volpi Cup)—Fushiro Mifune (Japan) in "AKAHIGE".
 Best Actress (Volpi Cup)—Annie Girardot (France) in "TROIS CHAMBERS A MANHATTAN".
 Jury's Special Prize—"SIMON OF THE DESERT" by Luis Bunuel (Mexico) and "I AM TWENTY" by Marlen Kutsev (Russia).
 Opera Prima Award—Todorovski (U.S.S.R.) for his film "FEDELTA".

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 Silver Medal—"KAPURUSH" by Satyajit Ray (India).
 Cidalc International Prize—"THE AFFAIRS" (Czechoslovakia).

KARLOVY VARY FILM FESTIVAL, 1964

(Biennial Czech-sponsored Festival held in July)

Grand Prize : "THE ACCUSED" (Czechoslovakia).

Special Jury Prize : "THE BEST MAN" (U.S.A.).

Best Actor : W. Glinsky in "ECHO" (Poland).

Best Actress : Jeanne Moreau in "LE JOURNAL D'UNE FEMME DE CHAMBRE" (France).

ARCHAEOLOGY

ARCHAEOLOGICAL STUDY IN INDIA— The idea of founding an institution for the study of oriental literature and culture was first conceived by Sir William Jones, puisne Judge of the Supreme Court at Calcutta. In January 1784 and within four months of his arrival, the Asiatic Society of Calcutta and not long afterwards in 1814, a museum, the first in India, was established in its premises. It became the nucleus of the Indian Museum in Calcutta.

Though great impetus was given to the study of archaeology, there was, however, no systematic exploration of the antiquarian remains in the country during all these years. In 1833, James Prinsep, Assay Master, Calcutta Mint, who was then Secretary of the Asiatic Society of Calcutta, discovered the key to the hitherto mysterious Brahmi alphabet and later deciphered the mystery of the Khroshthi alphabet which is used in the North-West. After Prinsep's death, the work was continued by others, notably by Sir A. Cunningham, a Lieutenant of the Royal Engineers. In 1848, he formulated a plan for an Indian Archaeological Survey but his efforts bore no fruit. In 1861, however, his memorandum to Lord Canning produced happy results. The task was entrusted to Cunningham who was made the first Archaeological Surveyor of India. So it was in 1862, the Archaeological Survey of India was established in India under Cunningham. But all the good works done by him had to be discontinued because Archaeological Survey was abolished in Feb. 1866. However, in 1870, during the vice-royalty of Lord Mayo, the Government of India sanctioned the post of a Director-General of Archaeological Survey, for which Cunningham was appointed. The conservation of ancient monuments, however, did not form part of the duties of this Department. This service was supposed to be performed by the Provincial Governments. The result was that a scant attention was paid to the structural monuments of India. However, in 1878, Lord Lytton, then Viceroy of India, wrote : "the preservation of national antiquities and works of art ought not to be left to the charges of local Government." The pronouncement led to the creation of the post of a 'Curator of Ancient Monuments.' But this post was again abolished and the task of conservation of monuments again devolved on the Provincial Governments. The same year saw another event of great

significance to archaeology in India in the passing of the *Indian Treasure Trove Act VI*.

When Cunningham retired in 1885, the survey works of monuments in North and South India were brought together and Dr. Burgess was appointed Director-General of the Survey. The whole of British India was divided into 5 circles, viz., Madras, Bombay, Punjab (with Sind and Rajputana), North-West Provinces (with Central India and Central Provinces) and Bengal (with Assam). But from 1889 the Survey again fell into bad days, with the result that several important posts were kept in abeyance.

But the brightest day of archaeology in India dawned with the emergence of Lord Curzon as the Viceroy of India in 1899. Two years later, the Survey of India was revived, and John Marshall, still in his twenties, was brought in as its Director-General. In one of his speeches, Lord Curzon announced that conservation of ancient monuments was one of the primary obligations of the Government. In 1904, the Legislature passed *Ancient Monuments Preservation Act*, which brought a new era for Indian archaeology. The main object of the Act was "to ensure the proper upkeep and repair of ancient buildings in private ownership excepting such as were used for religious purposes, to prevent the excavation of sites of historic interest by ignorant and unauthorised persons, and to secure control over the traffic in antiquities."

With the departure of Lord Curzon in 1906, the Survey passed through various vicissitudes of fortune. From 1907 onwards, there had been curtailments, retrenchments and reorganisations. The Reforms of 1919 made archaeology a Central subject and since then it has continued to be such.

In 1912, the starting point of Indian archaeology remained unchanged and the birth of Buddha continued as the landmark beyond which Indian archaeological investigation did not penetrate. Such a state continued till 1924 when a new light on the most ancient civilization of India was shed by the discoveries at Mohanjo-daro in Sind and at Harappa in Punjab, which quickly transformed the age of Indian antiquities and reckoning at one stroke and carried back to several millennia before the birth of Christ. Sir John Marshall himself wrote : "Now, at a single bound, we have taken back our knowledge of Indian civilization some 3,000 years earlier and have established the fact that in the third millennium before Christ and even before that, the peoples of the Punjab and Sind were living in well-built cities and in possession of a relatively natural culture with a high standard of art and craftsmanship and a developed system of pictographic writing." The period from 1925-31 was a boom period and the momentum gathered by Indian archaeology by the discoveries at Mohanjo-daro and at Harappa and the resultant status that India obtained in the international world of antiquity was reflected in the keen interest taken in problems relating to India's past, both here and abroad. From then onwards, the story of Indian archaeology is one of progress from success to success. Today, with the more scientific aid, of Carbon-14 analysis, than was available in the days of Marshall, the Indus Valley civilization, properly styled as the Harappa civilization, is dated between *circa* 2300 and 1700 B.C. and is

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh, famous for its seals, some of which reveal by their pictures and pictographs, scenes which are familiar to us from the very hymns of the *Rigveda*.

It was in Sir John Marshall's time that the regular archaeological explorations and survey works were undertaken throughout India.

With the attainment of Independence on 15th August, 1947 and the partition of the country, fresh reorganisation of the Survey was called for. While the Indus Valley and Gandhara regions were lost by India, an additional area of about 160,000 square miles came under the Central Archaeological Department owing to the merger of States. The Archaeological Survey of India was later re-named *Department of Archaeology*, though in 1961, the year of its centenary, it was reverted to its old name.

ADMINISTRATION— The Department of Archaeology is under though in 1961, the year of its centenary it was reverted to its old name. the charge of a Director-General. He is assisted by Jr. Director-General, three Deputy Directors-General in charge of monuments, explorations and the school of excavation and an Archaeological Engineer. This Department is responsible for the preservation of ancient monuments of national importance and for undertaking archaeological explorations. It also assists various non-governmental institutions in conducting explorations and excavations. It is under the Department of Scientific Research and Cultural Affairs in the Ministry of Education.

The Archaeological Survey has no provincial centres, but for the purpose of carrying on archaeological works in the States, it has been divided into 10 circles. There is a *Central Advisory Board of Archaeology*. This Board is an advisory body consisting of Parliament, States, learned bodies—both scientific and historical, and the Central Archaeological offices.

PROTECTION FROM MISUSE— The *Ancient Monuments and Archaeological Sites and Remains Preservation Act* of 1958 came into force on the 15th October, 1959. The main provisions are : (1) offences against protected monuments by way of destruction, removal, defacement or misuse will henceforth be a cognizable offence under the law ; (2) greater measure of protection to cultural relics than possible hitherto under the *Ancient Monuments Preservation Act, 1904* ; (3) no person including the owner or occupier of ancient sites, shall encumber the sites with modern construction or undertake mining, quarrying, excavating and blasting operation without the permission of the Central Government ; (4) compulsory acquisition of antiquities of historical or archaeological importance in private possession and in danger of being destroyed or misused. The Central Government also reserves the right to prohibit the movement of such antiquities except with the permission of the Director-General.

RESEARCH— The works of the Department are primarily twofold—conservation and research and exploration. It is divided into 4 branches, viz., *Excavation Branch*, *Pre-history Branch*, *Epigraphy Branch*, *Chemical Branch*, *Museums Branch* and *Archaeological Atlas Branch*.

Epigraphy Branch—India has inherited a vast legacy of epigraphical material. The number of old inscriptions discovered run literally into thousands. Inscriptions are found more commonly on metals and stones. This research is being carried on by the *Epigraphy Branch*.

Chemical Branch—came into being in 1917. The principal work of

this Branch is the chemical treatment and preservation of museum exhibits and other antiquities, chemical conservation of monuments and interpretation of ancient Indian techniques through chemical analysis and scientific examination of all specimens.

Museums Branch—The development of Indian museums has been one of the important works of the Department. The progressive expansion of archaeological enterprise throughout the country gave rise to the growth of archaeological museums on excavated sites, such as Nalanda, Sarnath, etc. This Branch of the Department was established in 1945 to control site museums. India has, at present, about 100 museums, most of which house archaeological exhibits. The first museum of the country was founded by the Asiatic Society in 1814, which grew into what is now the Indian Museum in Calcutta.

Excavation Branch—This Branch is engaged in the work of exploration and excavation all over India. These two works have led to the discoveries of many archaeological sites, temples, inscriptions, images, ruins and even skeletons.

WHEELER COMMITTEE'S REPORT—Reviewing Committee on Archaeology, headed by Sir Mortimer Wheeler who was Director-General of Archaeology during the forties, submitted its report to the Education Minister on April 3, 1965.

The Committee's view is that India is spending too little on preserving her rich past. The Committee is also reported to have suggested that the Archaeological Survey of India should be an autonomous organization. The Ministry should not interfere in its routine work. The Committee has recommended for the Survey, an administrative set-up similar to that of the Council of Scientific and Industrial Research.

For a country of India's size, the number of monuments—about 4,000—is too small. Britain, a much smaller country in size, has more of them. Even more important than their number is the upkeep of the monuments and other treasures of the past, the Committee has said. The Survey lacks people trained in the latest preservation techniques. It has a limited staff. It pays them rather low salaries and fails to attract a sufficient number of bright people.

The lack of talents is most marked on the engineering side. The preservation of monuments needs good engineers but, there being little prospects of promotion, few are willing to work for the Survey.

Owing to a lack of money and talents too many amateurs seem to be playing around with the precious treasures of the past. Universities and departments of archaeology in the States are digging up more places than they can properly investigate. They are often looking merely for sensational discoveries that can make newspaper headlines. They send out parties with few people trained for the job. These groups often destroy more than they preserve. They do not even submit a proper report of their findings.

While pointing out the limitations of the Survey, the Committee has also praised the good work done by it. Many of its failings were attributable to a lack of funds and too much interference by Ministry officials in its routine affairs.

MUSEUMS—See *Index*.

NATIONAL EMBLEM, HONOURS AND AWARDS

NATIONAL FLAG

The *first national flag* in India was hoisted on August 7, 1906 in the Parsee Bagan Square, Calcutta. The flag was composed of horizontal stripes of red, yellow and green.

The *second flag* was hoisted by Madame Cama and her band of exiled Indian revolutionaries in Paris in 1907. It was similar to the first flag with slight modifications.

The *third flag* was hoisted during Home Rule Movement in 1917 by Dr. Annie Besant and B. G. Tilak. This flag had five red and four green horizontal stripes and in the left hand top corner (the pole end) was the Union Jack occupying one-fourth of the space and with seven stars in the centre. There was also a crescent and a star in one corner.

The *Tri-colour* was first born at A.I.C.C. meeting at Bezwada in 1921 when a flag was shown by an Andhra youth and improved by Mahatma Gandhi with the addition of a white stripe and *charkha*. Though not officially accepted by the Congress, it was hoisted on all Congress occasions. In 1931, when A.I.C.C. met at Karachi, a resolution was passed stressing the need for a national flag. In the same year, a resolution was passed adopting a tri-colour flag as our National Emblem. It had three colours: saffron for courage and sacrifice, white for truth and peace, green for faith and chivalry. It also carried a *charkha* in blue on white band. The size was three lengths by two breadths.

On July 22, 1947, with the attainment of independence, the Constituent Assembly adopted it as free India's National Flag. The colours and their significance remain the same. The *Dharma Chakra* of Emperor Asoka was adopted instead of *charkha*.

The *National Flag of India* now consists of a horizontal tri-colour of deep saffron at the top, white in the middle and dark green at the bottom in equal proportions. The ratio of the width of the flag to its length is 2:3. In the centre of the white band, is a wheel in navy blue to represent the *chakra*. Its design is that of the wheel which appears on the abacus of the Sarnath Lion Capital. Its diameter approximates to the width of the white band and it has 24 spokes. The National Flag was adopted by the Constituent Assembly of India on July 22, 1947 and was presented to the nation on behalf of the women of India at the midnight session of the Assembly on August 14, 1947.

Flag Code—The Flag Code was issued by the Government of India. The followings are the main Flag Code rules—

(1) Code prohibits the dipping of the flag to any person or thing.
 (2) No flag or emblem should be placed above the National Flag or to its right. All flags are to be placed to the left of the National Flag if they are hung in a line. When other flags are raised, the National Flag must be the highest.

(3) When the Flag is displayed from a staff projecting horizontally or at an angle from a window-sill, balcony or front of a building, the saffron side shall be at the farther end of the staff.

(4) When the Flag is displayed in a manner otherwise than by being flown from a staff, the saffron band must be uppermost when it is displayed flat and horizontal on a wall; when displayed vertically, the saffron band should be on the right with reference to the Flag, i.e., it should be to the left of a person standing facing it. When displayed over the middle of a street, running east-west or north-west, the Flag shall be suspended vertically with the saffron band to the north or to the east as the case may be.

(5) When the Flag is carried in a procession or a parade, it shall be either on the marching right, that is, the Flag's own right, or if there is a line of other flags, in front of the centre of the line.

(6) Normally, the National Flag should be flown on all important Government buildings, such as high courts, secretariats, commissioners' offices, collectorates, jails and the offices of district boards and municipalities. The frontier areas may fly the National Flag at some special points. The President and the Governors of States have their personal flags.

(7) Use of the Flag will, however, be unrestricted on certain special occasions, such as Republic Day, Independence Day, Mahatma Gandhi's Birthday, during the National Week and on any other days of national rejoicing. Even on such occasions, the normal provisions regarding displays of National Flag on motor cars shall not be relaxed.

(8) Use of the National Flag or any colourable imitation of it for the purpose of any trade, business, calling or profession or in the title of any patent or in any trade-mark or design without the prior permission of the Central Government is an offence.

NATIONAL EMBLEM

The *National Emblem* of India is an adaptation from the Sarnath Lion Capital of Asoka as it is preserved in the Sarnath museum. In the original, to mark the spot where the Buddha first preached to his disciples, there are four lions, standing back to back, mounted on an abacus with a frieze carrying sculptures in high relief of an elephant, a galloping horse, a bull, and a lion separated by intervening wheels (*Chakras*) over a bell-shaped lotus.

In the National Emblem adopted by the Government of India on January 26, 1950, only three lions are visible, the fourth being hidden from view. The wheel (*Chakra*) appears in relief at the centre of the abacus with a bull on the right, a horse on the left and the outlines of the other wheels (*Chakras*) on the extreme right and left. The bell-shaped lotus has been omitted. The words, *Satyameva Jayate*, meaning 'truth alone triumphs', are inscribed in Devnagari script below the Emblem.

The fact that the original Lion Capital designed between 242—232 B.C. was created by Emperor Asoka to hallow the spot where the Buddha first initiated his disciples in the eight-fold path of salvation, invests the Emblem with historical and spiritual significance. Carved out of a single block of sandstone, the original Capital was surmounted by the Wheel of Law (*Dharma Chakra*).

NATIONAL ANTHEM

The Constituent Assembly of India adopted on January 24, 1950, Rabindranath Tagore's song *Jana-gana-mana* as the *National Anthem* of India. The song was first sung on December 27, 1911 during Indian National Congress session at Calcutta. It was concurrently decided that Bankim Chandra Chatterjee's famous invocation, *Bande Mataram* occurring in his novel *Ananda Math*, published in 1882, shall have an equal status. The first political occasion on which it was sung, was the 1896 session of the Indian National Congress.

The Orchestral, Choral and Military Band versions of *Jana-gana-mana* have been standardised. The Government of India have emphasised that the general public should use the authorised versions of the Anthem, both on public and private occasions.

NATIONAL CALENDAR

A uniform *National Calendar*, based on the Saka era with Chaitra as its first month and a normal year of 365 days, has been adopted by the Government of India with effect from March 22, 1957 along with the Gregorian Calendar. The days of this Calendar have a permanent correspondence with the days of the Gregorian Calendar, Chaitra 1 falling on March 22 in a common year and on March 21 in a leap year. This National Calendar has been accepted for the following official purposes—(1) the Gazette of India, (2) News broadcasts by A.I.R., (3) Calendars issued by the Government of India, (4) Communications issued by the Government of India and addressed to members of the public.

NATIONAL BIRD

The Government of India have announced that *Peacock* should be accepted as the *National Bird* of India from 1964.

AWARDS, DISTINCTIONS & TITLES

Bharat Ratna—The award is made for exceptional work for the advancement of art, literature and science and in recognition of public service of the highest order. The decoration is in the form of a *peepul* leaf, 2 inches long, $1\frac{1}{2}$ inches in width and $\frac{1}{8}$ inch thick. It is of toned bronze. On the obverse side is embossed a replica of the sun, below which the words *Bharat Ratna* are embossed in Hindi. On the reverse are the State Emblem and the motto, also in Hindi. The Emblem, the sun and the rim, are made of platinum.

Padma Vibhushan—The award is made for exceptional and distinguished service in any field, including service rendered by Government servants.

Padma Bhushan—The award is made for distinguished service of a high order in any field, including service rendered by Government servants.

Padma Shri—The award is made for distinguished service in any field, including service rendered by Government servants.

For Gallantry in the Face of the Enemy

Param Vir Chakra—is the highest decoration of valour awarded for the "most conspicuous bravery or some daring or pre-eminent act of valour or self-sacrifice *in the presence of the enemy*, whether on land, at sea, or in the air." This decoration is made of bronze and is circular in shape. It has, on the obverse, four replicas of 'India's Vajra' embossed round the State Emblem in the centre. On the reverse, the words "Param Vir Chakra" are embossed in both Hindi and English, with two lotus flowers in the middle. The decoration is worn on the left crest with a plain purple-coloured riband, an inch and a quarter in width.

Mahavir Chakra—is the second highest decoration and is awarded for acts of conspicuous gallantry *in the presence of the enemy*, whether on land, at sea, or in the air. It is made of standard silver and is circular in shape.

Vir Chakra is third in the order of awards given for acts of gallantry *in the presence of the enemy*, whether on land, at sea or in the air. The decoration is made of standard silver and is circular in shape.

A recipient of any of these decorations is entitled to special pension.

Mentioned in Despatches—In recognition of distinguished and meritorious service in operational areas and acts of gallantry of an order not sufficiently high to warrant the grant of gallantry awards, a system of Mentioned in Despatches was instituted with effect from August 16, 1947. Those who are 'mentioned in despatches' are entitled to have an emblem—a miniature leaf.

For Gallantry other than in the Face of the Enemy

Ashoka Chakra, Class I—This medal is awarded for the most conspicuous bravery or some daring or pre-eminent act of valour or self-

sacrifice on land, at sea or in the air. The Chakra is made of gilt gold and is circular in shape.

Ashoka Chakra, Class II—is awarded for conspicuous gallantry. It is made of standard silver and is circular in shape.

Ashoka Chakra, Class III—is awarded for an act of gallantry. It is exactly like the other two Ashoka Chakras, except that it is made of bronze.

Officers and all other ranks of the Army, Navy and Air Force, the Reserved Forces, the Territorial Army, the Militia and any other lawfully constituted forces, as also members of the Nursing services of the Armed Forces and civilian citizens of either sex in all walks of life are eligible for the award of Ashoka Chakra, Classes I, II, III.

Vishisht Seva Medal—The Vishisht Seva (Distinguished Service) Medal is awarded to personnel of all the three Services in *Classes I, II & III* in recognition of distinguished service of the "most exceptional", an "exceptional" and a "high" order respectively.

Campaign Medals—1. *General Service Medal*—awarded for services rendered under active service conditions after August 15, 1947. An individual qualifying for it for the first time is awarded the medal together with a clasp indicating the particular operation for which the award has been made.

2. *Clasp*—So far two clasps have been instituted: (a) *Jammu and Kashmir Clasp* was awarded for operations in Jammu & Kashmir between October 1947 and January 1949; (b) *Overseas Clasp* was intended for services overseas. The first issue was made to those service personnel who saw operational service in Korea between 1950 and 1953.

Medals for Meritorious Service and Long Service and Good Conduct—There are two classes of medals: (1) *Meritorious Service Medal* is awarded on a Service-wise allotment of vacancies at the rate of one per 900 men of the authorised strength; (2) *Long Service and Good Conduct Medal* is awarded on a Service-wise allotment of vacancies at the rate of two per 900 men.

Jeevan Raksha Padak—This medal is awarded for meritorious acts or a series of acts of a humane nature displayed in saving life from drowning, fire and in rescue operations in mines etc.

Decorations to Territorial Army Personnel—1. *Territorial Army Decoration* is awarded to Commissioned Officers of the Territorial Army with 20 years' meritorious service. 2. *Territorial Army Medal* is awarded to Junior Commissioned Officers, Non-Commissioned Officers and the men of the Territorial Army with 12 years' efficient service.

AKADEMI AWARDS

Lalit Kala Akademi Awards—annual awards given to outstanding artists participating in the National Exhibition of Art. The Akademi

also honours its fellows with *Tamrapatra*, *Angavastra* and Rs. 5,000 as a token of respect for their outstanding contribution in the field of art.

Sangeet Natak Akademi Awards—annual awards given to outstanding artistes in the field of dance, drama and music.

Sahitya Akademi Awards—prizes of Rs. 5,000 each awarded annually to the most outstanding books of literary merit published in any of the sixteen Indian languages recognised by the Akademi. There are also two Awards for Sanskrit. The Award, in the form of a casket containing an inscribed copper plate and a cheque of Rs. 5,000, is given to the author or his heir.

OTHER DISTINGUISHED AWARDS

Shanti Swarup Bhatnagar Memorial Awards—for scientific research are given by the Council of Scientific and Industrial Research since 1958. Dr. P. S. Krishnan was the first recipient of this Award. Four Awards are given each year for research in the fields of Physical Sciences, Chemical Sciences, Biological Sciences and Engineering Sciences. Each Award carries the cash prize of Rs. 10,000.

Awards to Scholars—Certificates of Honour and a monetary grant of Rs. 1,500 per annum for life, to eminent Sanskrit, Persian and Arabic scholars have been instituted since 1958.

Arjuna Awards—These awards made to the "Sportsmen of the Year" were instituted in 1961 and are made on the basis of outstanding contribution made to enhance the glory of the game during the year.

State Awards for Films—of high aesthetic and technical standards and of an educative and cultural value have been a regular annual feature since 1954. The Awards are given separately for feature, documentary and children's films as well as for educational films in 16 mm. and film strips in 35 mm. Cash awards of Rs. 20,000 and Rs. 5,000 are given to the producer and director respectively of the Award-winning film.

National Professors—This post was created in 1948. The National Professorship carries a salary of Rs. 2,500 per month for life. It has been created to help the holders devote their entire energy to research work.

National Awards for Teachers—This is a National Award given to teachers in recognition of the meritorious services rendered by them to the community. Each recipient of the Award is given a Certificate of Merit and Rs. 500 in cash. Since the scheme of National Awards was instituted in 1958-59, 520 teachers—276 primary and 244 secondary—have received the awards till 1964-65.

Krishi Pandits—The title 'Krishi Pandit' is given annually by the Indian Council of Agricultural Research to farmers who have made notable contribution for the cause of Indian agriculture.

Gopal Ratna—This title was instituted in 1956 by the Government of India and is awarded to the owners of the highest milk-yielding cows

and buffaloes of certain breeds in All-India Milk-Yield Competition. Owners of each breed of cattle, besides the title of 'Gopal Ratna', get cash prizes of Rs. 2,000 each.

Emeritus Scientists—It is awarded by the Council of Scientific and Industrial Research. The title carries with it a salary of Rs. 1,000 per month for five years and the option to work in any institution of the country.

Watumull Awards—These prizes instituted in memory of Dr. G. J. Watumull, an Indian immigrant to Honolulu, are awarded since 1960 for outstanding post-doctoral work in different fields of science, humanity and culture which promote international understanding.

Nehru Prize—The prize will be awarded every year to a person or an institution contributing most during the preceding year to ideals of world peace and international understanding. The prize consists of a cash award of Rs. 1,00,000 and a medal.

Bharatiya Jnanpith Prize—This prize of Rs. 1,00,000 is awarded by the above Trust to outstanding literators in any Indian language.

PRESIDENT'S MEDALS

(Order of Precedence for Wearing)

1. Bharat Ratna ; 2. Param Vir Chakra ; 3. Ashoka Chakra, Class I ;
4. Padma Vibhushan ; 5. Padma Bhushan ; 6. Vishisht Seva Medal Class I ;
7. Maha Vir Chakra ; 8. Ashoka Chakra Class II ; 9. Padma Shri ;
10. Vishisht Seva Medal, Class II ; 11. Vir Chakra ; 12. Ashoka Chakra, Class III ; 13. The President's Police and Fire Services Medal for Gallantry ;
14. Sena-Nao Sena-Vayu Sena Medal ; 15. Vishisht Seva Medal Class III ;
16. The Police Medal for Gallantry ; 17. The General Service Medal, 1947 ; 18. Sainya Seva Medal ; 19. Videsh Seva Medal ; 20. The President's Police and Fire Services Medal for Distinguished Service ;
21. The Meritorious Service Medal ; 22. The Long Service and Good Conduct Medal ; 23. The Police Medal for Meritorious Service ; 24. The Territorial Army Decoration ; 25. The Indian Independence Medal, 1947 ;
26. The Independence Medal, 1950 ; 27. Commonwealth Awards ;
28. Other Awards.

BHARAT RATNA

List of Recipients up-to-date are—

Dr. Rajendra Prasad, Jawaharlal Nehru, C. Rajagopalachari, Dr. S. Radhakrishnan, Dr. C. V. Raman (1954), Dr. Bhagawan Das, Dr. M. Visvesaraiya (1955), Pt. Govind Ballabh Pant, Dr. D. K. Karve (1957), Dr. B. C. Roy (1961), Purshottamdas Tandon (1961), Dr. P. V. Kane (1963), Dr. Zahir Hussain (1963), Lal Bahadur Shastri (1966—Posthumous).

WINNERS OF PARAM VIR CHAKRA*(India's highest military decoration)*

- Major Somnath Sharma, *Kumaon Regt. (Posthumous)*, Kashmir Operations, 1947. (Posthumous), Congo, 1961.
- 2nd Lt. R. R. Rane, *Corps of Engineers*, Kashmir Operations, 1948. Maj. Dhan Singh Thapa, *Gorkha Rifles*, Ladakh, 1962.
- Com. Hav-Major Piru Singh, *Rajputana Rifles (Posthumous)*, Kashmir Operations, 1948. Subedar Joginder Singh, *Sikh Regiment*, NEFA, 1962.
- L/Nk. Karam Singh, *Sikh Regiment*, Kashmir Operations, 1948. Maj. Shaitan Singh, *Kumaon Regiment (Posthumous)*, Ladakh, 1962.
- Naik Jadunath Singh, *Rajput Regiment (Posthumous)*, Kashmir Operations, 1948. CQMh Abdul Hamid, *Grenadiers (Posthumous)*, Operations against Pakistan, 1965.
- Capt. G. S. Salaria, *Gorkha Rifles* against Pakistan, 1965.
- Lt. Col. A. B. Tarapore, *Armoured Corps (Posthumous)*, Operations against Pakistan, 1965.

PADMA VIBHUSAN**1965***(Operations against Pakistan)*

General J. N. Chaudhuri, Chief of the Army Staff; Air Chief Marshal Arjan Singh, Chief of the Air Staff.

1966

Dr. Valerian Cardinal Gracias, Archbishop of Bombay.

PADMA BHUSAN**1965**

Everest Expedition—Lt.-Commander Mohan Singh Kohli (*Leader of the Indian Everest Expedition Team*); Nawang Gombu (*Everest Climber*); Sonam Gyatso (*Everest Climber*).

Operations against Pakistan—Lt.-Gen. Harbakhsh Singh, G.O.C.-in-C., Western Command. Lt.-Gen. Kashmir Singh Katoch, G.O.C., XV Corps. Lt.-General Joginder Singh Dhillon, G.O.C., XI Corps. Lt.-Gen. Patrick Oswald Dunn, G.O.C., I Corps. Air Vice-Marshal Pratap Chandra Lal, Vice-Chief of Air Staff. Air Vice-Marshal Ramaswamy Rajaram, Air Officer Commanding-in-Chief, Western Air Command.

1966

Babubhai Maneklal Chinai, industrialist, Bombay; Bhabani Charan Mukherji, formerly Chairman and Managing Director, Fertilizer Corporation of India; Haribhau Upadhyaya, writer and social worker, Rajasthan; Homi Nusserwanji Sethna, Director, Engineering Group, Atomic Energy Establishment, Trombay; Dr. Bhai Jodh Singh, formerly Vice-Chancellor,

Punjabi University, Patiala; Kizhakike Potte Kesava Menon, Editor of *Mathrubhumi*, Kozhikode; Mannathu Padmanabhan, social worker, Kerala; Dr. Puliyur Krishnaswamy Duraiswami, orthopaedic surgeon, Safdarjang Hospital, New Delhi; Shankar Pillai, Editor of *Shankar's Weekly*, New Delhi; Tiruvarur Swaminathier Ramaswami Aiyar, Chairman, Mylapore Academy, Madras; Varghese Kurien, General Manager, Kaira District Co-operative Milk Producers' Union Ltd., Anand, Gujarat; Dr. Vikram Ambalal Sarabhai, Director, Physical Research Laboratory, Ahmedabad; Vinayak Sitaram Sarwate, social worker, Indore; Zubin Mehta, Orchestra Director.

PADMA SHRI

1965

Everest Expedition—Major Narendra Kumar, Deputy Leader, Indian Everest Expedition Team; Capt. Avtar Singh Cheema, Everest Climber; Sonam Wangyal, Everest Climber; Chandra Prakash Vora, Everest Climber; Ang Kami, Everest Climber; Harish Chandra Singh Rawat, Everest Climber; Capt. Hari Pal Singh Ahluwalia, Everest Climber; Phu Dorji, Everest Climber.

1966

Sm. Bhanumati Ramakrishna, cinema artiste, Madras; Swami Bichitranda Dasa, social worker, Orissa; B. Sivamurthy Shastri, Kannada scholar, Mysore; Dr. Dharmendra, Director, Central Leprosy Teaching and Research Institute, Chingleput, Madras; Ebrahim Alkazi, Director, National School of Drama, New Delhi; Dr. Ernest Joachim Joseph Borges, Cancer Surgeon, Maharashtra; Eswara Iyer Krishna Iyer, musician, actor and dancer, Madras; Harishankar Sharma, Hindi writer and poet, U.P.; Inderjit Singh Tulsi, Punjabi poet; Jagadish Prasad, Engineer-in-Chief, Public Works Department, U.P.; Dr. (Miss) Jerusha Jhirad, gynaecologist and social worker, Bombay; Kishan Lal, Hockey player; Kuldip Singh Virk, Deputy Commissioner, Ferozepore; Kundan Lal Berry, Divisional Superintendent, Northern Railway, Ferozepore; Maqbool Fida Hussain, painter, New Delhi; Mohammad Din Jagir, Jammu and Kashmir; Sardar Mohan Singh, senior Vice-President, New Delhi Municipal Committee; Prof. Nirmal Kumar Bose, scholar, West Bengal; Poddar Ramavtar Arun, Hindi poet, Bihar; Purushottam Laxman Deshpande, dramatist, Maharashtra; Rajeswar Nath Zutshi, Principal, Daly College, Indore; Ramprasad Ramchand Khandelwal, industrialist and philanthropist, Maharashtra; Dr. Robert Brocklesby Davis, psychiatrist, Bihar; Sanganbasappa Mallangouda Patil, Managing Director, Hindustan Machine Tools Ltd., Bangalore; Dr. Satish Dhawan, Director, Indian Institute of Science, Bangalore; Sayyid Ahmadullah Qadri, Urdu writer and member of Legislative Council, A.P.; Surinder Singh Bedi, Deputy Commissioner, Amritsar; Stanislaus Joseph Coelho, Collector and District Magistrate, Kutch; Sm. Sumitra Charat Ram, promoter of Art and Music, Delhi; Villupuram Chinnaiya Ganesan, cinema actor, Madras.

GALLANTRY AWARDS IN OPERATIONS AGAINST PAKISTAN, 1965

Param Vir Chakra

CQMH. Abdul Hamid (Posthumous); Lt.-Col. A. B. Tarapore (Posthumous).

Vishisht Seva Medal, Class I

Major-General Joginder Singh, Chief of Staff, Western Command, Group Captain George Kanisht Kumar John, Commander of an operational wing and Group Captain Walter Vernon Alexander Lloyd, Officer Commanding of an operational wing in the Punjab.

Mahavir Chakra

Brig. Ram Dharam Dass Hira, Capt. Chander Narain Singh, Lt.-Col. Gurbans Singh Sangha, Wing Cdr. William Macdonald Goodman, Major Bhaskar Roy, Major-General Har Krishen Sibal, Major-General Gurbaksh Singh, Brig. Khem Karan Singh, Major Ranjit Singh Dayal, Sub. Ajit Singh (*Posthumous*), Lt.-Col. Desmond Hayde, Lt.-Col. Narindra Nath Khanna, Wing Cdr. Prem Pal Singh, Sq. Leader Padmanabha Gautam, Lt.-Col. Harbans Lal Mehta (*Posthumous*), Lt.-Col. Salim Caleb, Major Bhupinder Singh and Major Asa Ram Tyagi.

Major-General Rajindar Singh who operated his armed division in the Sialkot sector was awarded a bar to Maha Vir Chakra.

Vir Chakra

Lance Havildar Gurdev Singh, Lance Havildar Umrao Singh, Flt.-Lt. Trilochan Singh, Sq. Leader Trevor Keelor, Sub. Man Bahadur Gurung, Lance Naik Raj Bahadur Gurung, Lt. Virender Singh Pathania, Surinder Pal Singh Sekhon, Lt.-Col. Chhaju Ram, Capt. Rakesh Chandra Bakshi, Flt.-Lt. Hamir Singh Mangat, Lt. Teja Singh, Flying Officer Adi Rustomji C. Gandhi, Flying Officer Vinod Kumar Neb, Lance Havildar K. G. George, Rifleman Mathan Singh, Sq. Leader Madhukar Shantaram Jatar, Sq. Leader Sudarshan Handa, Flt.-Lt. Alfred Tyrone Cooke, Flying Officer Subodh Chandra Mangain, Risaldar Achhar Singh, Major Mohammed Ali Raaz Sheikh, Major Jitinder Kumar, Second Lt. Har Iqbal Singh Dhaliwal, Lt. Bhikram Singh, Naik Risaldar Mohd. Ayub Khan, Major Suresh Chander Vadera, Havildar Ajmer Singh, Sepoy Balam Ram, Major Surendar Mohan Sharma, Wing Cdr. Bharat Singh, Major Sarvjit Singh Ratra, Second Lt. Ravinder Singh Bedi, Sq. Leader Amarjit Singh Sandhu, Sq. Leader Denzil Keelor, Flt.-Lt. Vinoy Kapila, Major Mohammed Ahmed Zaki and Flt.-Lt. Ajoy Kumar Majumdar.

RABINDRA MEMORIAL PRIZE

(Awarded by the Govt. of West Bengal)

- 1950—Dr. Nihar Ranjan Ray (Bangalir Itihas; Adi Parba).
Satinath Bhaduri (Jagori).
- 1951—Jogesh Chandra Ray (Ancient Indian Life). Bibhuti Bhusan Banerjee (Ichhamati).
- 1952—Brojendranath Banerjee (Sambad Patre Sekaler Katha, Bangla Saimayik Patra, Sahitya Sadhak Charitmal, etc.). Dr. Kali Pada Biswas & Ekkari Ghosh (Bharater Banausadhi).
- 1953—Dinesh Chandra Bhattacharjee (Bange Nabyanayya Charcha).
- 1954—Sm. Rani Chanda (Purna Kumbha).
- 1955—Rajsekhar Bose (Krishnakali). Tarasankar Banerjee (Arogya Niketan).
- 1956—Samarendra Nath Sen (Vijnaner Itihas: Vol. I).
- 1957—Pravat Kumar Mukherjee (Rabindra Jibani). Dr. R. C. Majumdar (History & Culture of the Indian People).
- 1958—Premendra Mitra (Sagar Theke Fera). Benoy Ghosh (Paschim Banger Sanskriti). Dr. Suniti K. Chatterjee (Literature Mediavali E. Moderne Del Subcontinente Indiano — in Italian).
- 1959—Upendranath Bhattacharya (Banglar Baul O Baul Gan). Haridas Mukherjee & Mrs. Uma Mukherjee (Origin of National Education Movement).
- 1960—Pramatha Nath Bishi (Carey Saheber Munshi). Radhagovinda Nath (Gaudiya Vaishnava Darshan).
- 1961—Haridas Siddhantabagish (Mahabharat). Swami Prajnana-nanda (Historical Development of Indian Music).
- 1962—Balaichand Mukherjee (Banful) (Hate Bazare). Jitendra Nath Banerjee (Pancho-Pasana).
- 1963—Subodh K. Chakravarti (Ramanyi Biksha). Suresh Ch. Banerjee (Smriti Sastre Bangali).
- 1964—Bimal Mittra (Kori Diye Kinlam). Dr. Mrityunjoy Prasad Guha (Akash-O-Prithibi). Sankarnath Roy (Bharater Sadhok).
- 1965—Gajendra Kr. Mitra (Pous Phaguner Pala). Dr. Sukumar Sen (Bharatiya Sahityer Itihash). Dr. Sachindra Nath Bose (Prag-itihasher Manush).

BHARATIYA JNANPITH PRIZE, 1965

G. Shankara Kurup for his book of poems, "Odakuzhal" (Malayalam).

SHANTI SWARUP BHATNAGAR MEMORIAL AWARDS

- 1963—Dr. R. Ramanna (physical sciences); Dr. B. D. Tilak (chemical sciences); Dr. J. J. Ganguly (biological sciences) and Dr. Brahm Prakash (engineering sciences).

The 1963 award for *medical sciences*, made every two years, is shared by Dr. S. H. Zaidi and Dr. B. K. Anand.

1964—Dr. A. R. Verma (*physical*

sciences); Dr. Sukhdev (*chemical sciences*); Dr. D. S. Athwal (*biological sciences*) and Dr. B. R. Nijhawan (*engineering sciences*).

STATE FILM AWARDS, 1965

(For Films of 1964)

Best feature film of India (President's Gold Medal, cash prize of Rs. 20,000 for Producer and Rs. 5,000 for Director)—"Charulata" (Bengali).

Second best feature film (Cash prize of Rs. 10,000 for Producer and Rs. 2,500 for Director)—"Haqeeqat" (Hindi).

Certificate of Merit—"Unnaipol Oruvan" (Tamil).

Best Story-writer—Balaichand Mukherjee for the story of the film "Aarohi" (Bengali).

Certificate of Merit as the Second best documentary film (Cash prize of Rs. 8,000 to Producer and Rs. 500 to Director)—"Apostle of India" and "One Day."

Third best documentary film—"All under Heaven by Force" and "And Miles to go."

Certificate of Merit for the best educational film—"Sterilization of the Female."

REGIONAL FILM AWARDS, 1965

Hindi: 1. "Dosti"—President's silver medal. 2. "Naba Janma"—Certificate of merit.

3. "Geet Gaya Pathron Ne"—Certificate of Merit. **Tamil:** 1. "Kai Kodutha Deivam"—President's silver medal.

Marathi: 1. "Pathlaag"—President's silver medal. 2. "Tuka Zalasa Kalas"—Certificate of Merit.

3. "Sawala Maza Aika"—Certificate of Merit. **3. "Server Sundaram"—Certificate of merit.**

English: 1. "The Avalanche"—President's silver medal. **Telugu:** 1. "Doctor Chakravarthi"—President's silver medal.

Punjabi: 1. "Jagga"—President's silver medal. 2. "Ramadasu"—Certificate of merit.

Kashmiri: 1. "Mainz-Raat"—President's silver medal. **Kannada:** 1. "Chandavalliya Thota"—President's silver medal.

Bengali: 1. "Aarohi"—President's silver medal. 2. "Anustup Chhanda"—Certificate of merit.

Assamese: 1. "Pratidhwani"—President's silver medal. **Malayalam:** 1. "Thacholi Othenan"—President's silver medal.

Oriya: 1. "Sadhana"—President's silver medal. 2. Aadya Kirnangal"—Certificate of merit. 3. "Kudumbini"—Certificate of merit.

SAHITYA AKADEMI AWARDS, 1965

Bishnu Dey—'Smriti Satta Bhabishyat' (*poems in Bengali*); Verrier Elwin—'The Tribal World of Verrier Elwin' (*autobiography in English*); Kaka (D. V.) Kalelkar—'Jeevan-Vyavastha' (*essays in Gujarati*); Dr. Nagendra—'Rasa-Siddhanta' (*Treatise on Poetics in Hindi*); S. V. Ranganna—'Ranga Binappa' (*philosophical reflections in Kannada*); Sm. N. Balamani Amma—'Muthassi' (*Poems in Malayalam*); P. L. Deshpande—'Vyakti Ani Valli' (*sketches in Marathi*); Baikuntha Nath Patnaik—'Uttarayana' (*poems in Oriya*); Kartar Singh Duggal—'Iknch-hit Chanandi' (*short stories in Punjabi*); P. Sri Acharya—'Sri Ramanujar' (*biography in Tamil*); Rayaprolu Subbarao—'Misra Manjari' (*poems in Telugu*); Rajinder Singh Bedi—'Ek Chadar Maili-Si' (*novelette in Urdu*).

SANGEET NATAK AKADEMI AWARDS, 1965

Dance: Guru Gopinath (*Kathakali*); Guru Binin Sinha (*Manipuri*) and Chokalingam Pillai (*Bharat Natyam*).
Drama: Aravindaksha A. Menon (*acting in Malayalam*); Krishnachandra Bhatvadekar (*acting in Sanskrit*); Moolji Khushal Nayak (*acting in Gujarati*) and Upendra Nath 'Ashka' (*playwriting in Hindi*).
Music: Hira Bai Barodekar (*Hindustani vocal*); Pt. Sakharan (*Hindustani instrumental: Pakhawaj*); Mrs. T. Brinda (*Karnatak vocal*) and T. R. Mahalingam (*Karnatak instrumental: Flute*).

LALIT KALA AKADEMI AWARDS

Prokash Karmakar; J. Sultan Ali; Ambadas; D. K. Das Gupta; Bal Chhabda; Surya Prakash; Ram Singh Bawa; M. K. Bardhan; K. S. Kulkarni; P. V. Janakiram.

ARJUNA AWARDS, 1965

Polo—Rao Raja Hanut Singh. *Football*—Jarnail Singh.
Wrestling—Bishambar Singh. *Cricket*—Nawab of Pataudi.
Athletics—Makhan Singh. *Table-Tennis*—Gautam R. Divan.
Hockey—S. Lakshman.

Arjuna Awards were also given to all the members of the Indian Everest Expedition Team, 1965.

EMERITUS SCIENTISTS OF INDIA,

Dr. K. N. Mathur.	Dr. C. G. Pandit.	Dr. P. V. Gharपुरi.
Dr. V. Subramaniam.	Dr. R. Vishwanathan.	Dr. H. N. Ray.
Dr. Janki Ammal.	Dr. R. N. Chaudhuri.	Dr. R. N. Chaudhury.
Dr. Kausambi.	Dr. S. T. Achar.	Dr. Dharmendra.

AWARDS TO SCHOLARS, 1965

Sanskrit: Dr. Radha Gobinda Basak, Mrs. Siddeshwar Shastri Chitrab,
 Dr. Mangal Deva Shastri, T. A. Venkateswara Dikshitar.
Arabic: Dr. Md. Abdul Muid Khan.

NATIONAL PROFESSORS

- 1949 : Dr. C. V. Raman.
 1958 : S. N. Bose.
 Dr. K. S. Krishnan.
 1959 : Dr. Radhabinode Pal (*Juris-*
 prudence).
 Dr. P. V. Kane (*Indology*).
 1962 : Dr. S. K. Mitra.
 1963 : Dr. D. N. Wadia.
 Dr. V. R. Khanolkar.
 1964 : Dr. Suniti Kumar Chatterjee
 (*Humanities*).
 1965 : S. R. Ranganathan.

SPORTS SECTION

CRICKET

TEST CRICKET RECORDS

Highest Innings Totals :

- 303 : England *v.* Australia (Oval), 1938.
 790 : West Indies *v.* Pakistan (Kingston), 1957—58.
 758 : Australia *v.* West Indies (Kingston), 1954—55.
 729 : Australia *v.* England (Lord's), 1930.
 701 : Australia *v.* England (Oval), 1934.
 849 : England *v.* West Indies (Kingston), 1929—30.

Lowest Innings Totals :

- 26 : New Zealand *v.* England (Auckland), 1954—55.
 30 : South Africa *v.* England (Port Elizabeth), 1895—96.
 30 : Do. *v.* England (Birmingham), 1924.
 35 : Do. *v.* England (Cape Town), 1898—99.
 36 : Australia *v.* England (Birmingham), 1902.
 36 : South Africa *v.* Australia (Melbourne), 1931—32.

Highest Individual Innings :

- *365 : G. Sobers : West Indies *v.* Pakistan (Kingston), 1957—58.
 364 : L. Hutton : England *v.* Australia (Oval), 1938.
 337 : Hanif Mohammad : Pakistan *v.* West Indies (Bridgetown),
 1957—58.
 *336 : W. R. Hammond : England *v.* New Zealand (Auckland),
 1932—33.
 334 : D. G. Bradman : Australia *v.* England (Leeds), 1930.
 325 : A. Sandham : England *v.* West Indies (Kingston), 1929—30.
 311 : R. B. Simpson : Australia *v.* England (Manchester), 1964.
 307 : R. Cowper : Australia *v.* England, 1966.
 304 : D. G. Bradman : Australia *v.* England (Leeds), 193

Record Wicket Partnerships :

- First—413 by V. Mankad & P. Roy : India *v.* New Zealand (Madras), 1955—56.
 Second—451 by W. H. Ponsford & D. G. Bradman : Australia *v.* England (Oval), 1934.
 Third—370 by W. J. Edrich & D. C. S. Compton : England *v.* South Africa (Lord's) 1947.
 Fourth—411 by P. B. H. May & M. C. Cowdrey : England *v.* West Indies (Birmingham), 1957.
 Fifth—405 by S. G. Barnes & D. G. Bradman : Australia *v.* England (Sydney), 1946—47.
 Sixth—346 by J. H. Fingleton & D. G. Bradman : Australia *v.* Eng. (Melbourne), 1936—37.
 Seventh—347 by D. Atkinson & C. Depeiza : West Indies *v.* Australia (Bridgetown), 1954—55.
 Eighth—246 by E. G. Ames & G. O. Allen : Eng. *v.* New Zealand (Lord's), 1931.
 Ninth—163 by M. C. Cowdrey & A. C. Smith : England *v.* New Zealand (Wellington), 1962—63.
 Tenth—130 by R. E. Foster & W. Rhodes : England *v.* Australia, (Sydney), 1903—64.

Highest Wickets in an Innings :

- 10 for 53 runs : J. C. Laker (Eng.) *v.* Australia, Manchester, 1956.
 9 for 28 runs : G. A. Lohmann (Eng.) *v.* South Africa, 1895—96.
 9 for 37 runs : J. C. Laker (Eng.) *v.* Australia, Manchester, 1956.
 9 for 69 runs : J. S. Patel (India) *v.* Australia, Kanpur, 1959—60.
 9 for 102 runs : S. P. Gupte (India) *v.* West Indies, Kanpur, 1958—59.
 9 for 103 runs : S. F. Barnes (England) *v.* S. Africa, 1913—14.
 9 for 121 runs : A. A. Mailey (Australia) *v.* England, Melbourne, 1920—21.

Highest Run Aggregates :

W. R. Hammond (England)	..	..	7249 runs
D. G. Bradman (Australia)	..	..	6996 "
L. Hutton (England)	..	..	6971 "
R. N. Harvey (Australia)	..	..	6149 "
D. C. S. Compton (England)	..	..	5807 "
J. B. Hobbs (England)	..	..	5410 "
M. C. Cowdrey (England)	..	..	5042 "

Hat-tricks :

- F. R. Spofforth (Australia) *v.* Eng., Melbourne, 1878—79.
 W. Bates (Eng.) *v.* Australia, Melbourne, 1882—83.
 J. Briggs (Eng.) *v.* Australia, Sydney, 1891—92.

- G. A. Lohmann (Eng.) *v.* South Africa, Port Elizabeth, 1895—96.
 J. T. Hearne (Eng.) *v.* Australia, Leeds, 1899.
 H. Trumble (Australia) *v.* England, Melbourne, 1901—02.
 P. J. Loader (England) *v.* West Indies, Leeds, 1957.
 L. Kline (Australia) *v.* S. Africa, Cape Town, 1957—58.
 G. Griffin (S. Africa) *v.* England, Lord's 1960.
 W. Hall (West Indies) *v.* Pakistan, Lahore, 1958—59.
 L. Gibbs (West Indies) *v.* Australia, Adelaide, 1960—61.

TEST MATCH RESULTS

	<i>Played</i>	<i>Won</i>	<i>Lost</i>	<i>Drawn</i>	<i>Tied</i>
England	.. 417	164	113	140	0
Australia	.. 285	132	76	76	1
South Africa	.. 142	27	72	43	0
West Indies	.. 104	36	34	33	1
India	.. 94	10	35	49	0
New Zealand	.. 68	1	36	31	0
Pakistan	.. 50	10	14	26	0

NOTABLE CRICKET RECORDS

Highest total in one innings:

- 1107—Victoria *v.* N. S. Wales (Australia), Dec., 1926.
 1059—Victoria *v.* Tasmania (Australia), 1922—23.
 918—N. S. Wales *v.* South Australia (Sydney), 1900—01.
 912—Holkar *v.* Mysore (Indore), 1945—46.
 903—England *v.* Australia (Oval), 1938.

Lowest total in one innings:

- 12—Oxford University *v.* M. C. C., 1877.
 12—Northamptonshire *v.* Gloucestershire, 1907.

Highest individual scores:

- 499: Hanif Mohammad, 1959. *365: G. Sobers, 1958.
 *452: D. G. Bradman, 1929—30. 364: L. Hutton, 1938.
 *443: B. B. Nimbalkar, 1948—49. *359: V. M. Merchant, 1943—44.
 437: W. H. Ponsford, 1927—28. 359: R. B. Simpson, 1963—64.
 429: W. H. Ponsford, 1922—23. *357: R. Abel, 1899.
 424: A. C. MacLaren, 1895. 357: D. G. Bradman, 1935—36.
 384: B. Sutcliffe, 1852—53. 355: B. Sutcliffe, 1949—50.
 383: C. W. Gregory, 1906—07. 352: W. H. Ponsford, 1926—27.
 369: D. G. Bradman, 1935—36. 345: C. G. Macartney, 1921.
 *365: C. Hill, 1900—01. 337: Hanif Mohammad, 1957—58.

Most Centuries in First Class Cricket :

J. B. Hobbs ..	197 Centuries	D. C. S. Compton ..	122 Centuries
E. Hendren ..	170 "	D. G. Bradman ..	117 "
W. R. Hammond ..	167 "	A. Sandham ..	107 "
C. P. Mead ..	153 "	T. Hayward ..	104 "
H. Sutcliffe ..	149 "	L. E. G. Ames ..	102 "
F. E. Woollay ..	145 "	T. W. Graveney ..	102 "
L. Hutton ..	129 Centuries	E. Tyldesley ..	102 "
W. G. Grace ..	126 "		

Highest aggregates in a First Class match :

- 2376 : Bombay *v.* Maharashtra, 1948—49.
 2078 : Bombay *v.* Holkar, 1944—45.
 1981 : England *v.* South Africa, 1938—39.
 1929 : N. S. Wales *v.* South Australia, 1925—26.

Most Runs in a series :

- 974 by D. G. Bradman (Australia) against England, 1930.

Most Hundreds in consecutive Test innings :

- 5 by E. D. Weekes (West Indies) : 141 *v.* England, 1947—48 ;
 128, 194, 162 & 101 *v.* India, 1948—49.

Most Test appearances :

- 91 by T. G. Evans (England).

Most Hundreds in consecutive matches :

- 9 by D. G. Bradman (Australia).

Most Hundreds in a season :

- 18 by D. C. S. Compton, 1947.

Most Runs in a career :

- 61,237 runs by Sir J. B. Hobbs (Eng.) between 1905 & 1934.

Most Maidens ever bowled :

- 21 by Bapu Nadkarni (India) against England at Madras, Jan. 1964.

Most Hundreds in a series :

- 5 by C. L. Walcott (West Indies).

Fastest Scoring in a Day :

- 721 (all out) by Australia against Essex in England, May 1948.

Fastest Century :

- In 35 mins., by Percy G. H. Fender (Eng.) for Surrey *vs.* Northamptonshire, 1920.

Fastest Double Century :

- In 120 mins., by Gilbert Jessop for Gloucestershire *vs.* Sussex, 1903.

Most Centuries in Test Matches :

29 by D. G. Bradman (Australia) between 1928 and 1948.

Test Cricketers' Doubles :

T. E. Bailey (England)—2290 runs and 132 wickets.

V. L. Mankad (India)—2109 runs and 162 wickets.

Longest Test innings :

337 runs in 16 hrs. 13 mins., by Hanif Mohammad (Pakistan) against West Indies at Bridgetown, Jan. 1958.

Biggest Partnership :

4th wicket stand of 577 runs by V. S. Hazare and Gul Mohammed for Baroda against Holker, 1947.

Only Tie in Test Cricket :

Australia (505 & 232) *vs.* West Indies (453 & 284), Brisbane, 1960-61.

Bowling—Most Wickets in Test Matches :

301 by F. S. Trueman (England), from 1952—1964.

Most Wickets in a Test Match :

19 wickets for 90 runs by Jim Laker (Eng.) *vs.* Australia, Manchester, 1956.

Wicket-keeping—most victims in a career :

219 dismissals in 91 Tests by T. G. Evans (England).

Most victims in a Test Match :

9 dismissals by G. R. Langley (Australia) *vs.* England, Lord's, 1956.

WORLD COMPETITIONS**World Basketball Championship**

1950—Argentina ; 1954—U.S.A. ; 1959—Brazil ; 1963—Brazil.

Asian Basketball Championship, 1965

(Held at Kuala Lumpur)

Japan.

World Football Championship (Jules Rimmet Cup)

1930—Uruguay ; 1934—Italy ; 1938—Italy ; 1950—Uruguay ; 1954—Germany ; 1958—Brazil ; 1962—Brazil.

World Table-Tennis Championship, 1965

(Held at Ljubljana, Yugoslavia)

Swaythling Cup (Men)—China.

Corbillion Cup (Women)—China.

Men's Singles—Chuang Tse-tung (China) ; *Women's Singles*—Naoko Fukazu (Japan) ; *Men's Doubles*—Chuang Tse-tung and Hsu

Yiusheng (China); *Women's Doubles*—Lin Hu-Ching and Cheng Min-Chin (China); *Mixed Doubles*—M. Kimura and M. Seki (Japan).

Wimbledon Tennis Championship, 1965

Men's Singles—Roy Emerson (Australia).

Women's Singles—Margaret Smith (Australia).

Men's Doubles—Tony Roche and John Newcombe (Australia).

Women's Doubles—Maria Bueno (Brazil) and B. J. Moffitt (U.S.A.).

Mixed Doubles—K. N. Fletcher and Margaret Smith (Australia).

Davis Cup Winners

(Inaugurated in 1900)

1946—49 : U.S.A.	1958 : U.S.A.
1950—53 : Australia.	1959 : Australia.
1954 : U.S.A.	1963 : U.S.A.
1955—57 : Australia.	1964—65 : Australia.

Whitman Cup Winners

(Women's Team Event: Inaugurated in 1923)

1958 : Great Britain ; 1959 : U.S.A. ; 1960 : Great Britain ; 1961—65 : U.S.A.

International Badminton Championship for Men (Thomas Cup)

(Inaugurated in 1949 ; held every three years)

1948—49 : Malaya ; 1951—52 : Malaya ; 1954—55 : Malaya ; 1957—58 : Indonesia ; 1960—61 : Indonesia ; 1963—64 : Indonesia.

International Badminton Championship for Women (Uber Cup)

1957 : U.S.A. ; 1960 : U.S.A. ; 1961 : U.S.A.

World Chess Champions

1851—58 : A. Anderson (Ger.).	1937—46 : A. R. Alekhine (Russia).
1858—62 : Paul Morphy (U.S.).	
1862—66 : A. Anderson (Ger.).	1946—47 : Vacant.
1866—94 : W. Steinitz (Aus.).	1948—56 : M. Botvinnik (USSR).
1894—1921 : E. Lasker (Ger.).	1957 : V. Smyslov (USSR).
1921—27 : J. R. Capablanca (Cuba).	1958—59 : M. Botvinnik (USSR).
1927—35 : A. A. Alekhine (Russia).	1960 : M. Tal (USSR).
	1961—62 : M. Botvinnik (USSR).
1935—37 : Dr. M. Euwe (Holland).	1963—64 : T. Patrosyan (USSR).

Mardeka Football Tournament, 1965

(Held at Kuala Lumpur)

South Korea and Formosa (joint winners).

Ryder Cup*(Biennial Golf Competition between Great Britain and U.S.A.)*1957—Great Britain ; 1959—U.S.A. ; 1961—U.S.A. ; 1963—U.S.A. ;
1965—U.S.A.**Canada Cup***(Professional Golf Championship)*

1965 : South Africa

World Boxing Champions*(As on December 9, 1965)*

<i>Heavy Weight</i> (any weight)—	<i>Light Weight</i> (135 lb.)—
Casius Clay (U.S.).	Ismail Laguna (Panama).
<i>Light-Heavy Weight</i> (175 lb.)—	<i>Feather Weight</i> (126 lb.)—
Jose Torres (Puerto Rico).	Vincente Saldivar (Mexico).
<i>Middle Weight</i> (160 lb.)—	<i>Bantam Weight</i> (118 lb.)—
Dick Tiger (Nigeria).	Masahiko Harada (Japan).
<i>Welter Weight</i> (147 lb.)—	<i>Fly Weight</i> (112 lb.)—
Emile Griffith (U.S.).	Haracio Accavallo (Argentina).

World Heavy-Weight Boxing Champions

1882—92 : John L. Sullivan (U.S.).	1934—35 : Max Baer.
1892—97 : James J. Corbett.	1935—37 : Jim Braddock.
1897—99 : Bob Fitzsimmons.	1937—49 : Joe Louis (U.S.).
1899—1905 : James J. Jeffries.	1949—51 : Ezzard Charles (U.S.).
1905—06 : Marvin Hart.	1951—52 : Joe Walcott (U.S.).
1906—08 : Tommy Burns.	1952—55 : Rocky Marciano (U.S.).
1908—15 : Jack Johnson.	1956—59 : Floyd Patterson (U.S.).
1915—19 : Jess Willard (U.S.).	1959 : Ingemar Johansson
1919—26 : Jack Dempsey.	(Sweden).
1926—28 : Gene Tunney.	1960 : Flyod Patterson (U.S.).
1930—32 : Max Schmeling (Ger.).	1962 : Sonny Liston (U.S.).
1932—33 : Jac Sharkey.	1963 : Casius Clay (U.S.).
1933 : Primo Carnera (Italy).	1965 : Casius Clay (U.S.).

ATHLETICS**ONE MILE RECORD**

	m.	s.		m.	s.
1884 G. B. George (Eng.)	4	12.75	1933 Lovelock (N.Z.)	4	7.6
1915 Taber (USA)	4	12.6	1934 Cunningham (USA)	4	6.8
1923 P. Nurmi (Finland)	4	10.4	1937 Wooderson (G.B.)	4	6.4
1931 J. Ladoumegue (Fr.)	4	9.3	1942 G. Haegg (Sweden)	4	6.2

1942 Anderssen (Sweden)	4	6.2	1954 J. Landy (Australia)	3	57.9
1942 G. Haegg (Sweden)	4	4.6	1957 D. Ibboston (G.B.)	3	57.2
1943 Anderssen (Sweden)	4	2.6	1958 H. Elliott (Australia)	3	54.5
1944 Anderssen (Sweden)	4	1.6	1962 P. G. Snell (N.Z.)	3	54.4
1945 G. Haegg (Sweden)	4	1.4	1964 P. G. Snell (N.Z.)	3	54.1
1954 R. Bannister (G.B.)	3	59.4	1965 F. M. Jazy (France)	3	53.6

WORLD RECORDS

MEN

Running	Time	Holder	Year
Marathon	2 h. 12 m. 11.2 s.*	Abbe Bikila (Ethiopia)	1964
1 mile	3 m. 53.6 s.*	F. M. Jazy (France)	1965
2 miles	8 m. 22.6 s.*	F. M. Jazy (France)	1965
3 "	12 m. 52.4s.	Ron Clarke (Australia)	1965
6 "	26 m. 47 s.	Ron Clarke (Australia)	1965
10 "	47 m. 12.8 s.*	Ron Clarke (Australia)	1965
30,000 metres	1 h. 32 m. 34.6 s.*	T. F. K. Johnston (G.B.)	1965
25,000 "	1 h. 15 m. 22.6 s.*	R. Hill (G.B.)	1965
20,000 "	59 m. 22.7 s.	Ron Clarke (Australia)	1965
10,000 "	27 m. 39.4 s.	Ron Clarke (Australia)	1965
5,000 "	13 m. 24.2 s.	K. Keino (Kenya)	1965
3,000 "	7 m. 39.5 s.*	K. Keino (Kenya)	1965
3,000 "			
Steeplechase	8 m. 26.4 s.*	G. Roelants (Belgium)	1965
2,000 "	5 m. 01.6 s.	F. M. Jazy (France)	1962
1,500 "	3 m. 35.6 s.*	H. Elliot (Australia)	1960
1,000 "	2 m. 16.2 s.*	J. May (E. Germany)	1965
800 "	1 m. 44.3 s.*	P. G. Snell (N.Z.)	1962
400 "	44.9 s.*	O. T. Davis (U.S.)	1960
		C. Kaufman (Germany)	1960
		A. Plummer (U.S.)	1963
200 "	20.0 s.*	D. W. Sime (U.S.)	1956
		F. J. Budd (U.S.)	1962
200 " (turn)	20.2 s.	H. Carr (U.S.)	1964
100 "	10.0 s.*	A. Hary (Germany)	1960
		H. W. Jerome (Canada)	1960
		H. Esteves (Venezuela)	1964
		R. L. Hayes (U.S.)	1964

* Ratified Records.

Field Events	<i>Distance</i>	<i>Holder</i>	<i>Year</i>
High Jump	7 ft. 5 $\frac{3}{4}$ in.*	V. Brumel (USSR)	1963
Long Jump	8.35 metres*	R. Boston (U.S.)	1965
Hop, Step & Jump	55 ft. 10 $\frac{1}{2}$ in.*	J. Schmidt (Poland)	1960
Pole Vault	17 ft. 4 in.*	F. Hansen (U.S.)	1964
Shot Put	21.52 metres*	Randy Matson (U.S.)	1965
Discus Throw	211 ft. 9 $\frac{1}{2}$ in.*	L. Danek (Czechoslovakia)	1964
Javelin Throw	300 ft. 11 in.*	T. O. Pederson (Norway)	1964
Hammer Throw	71.26 metres	H. Connolly (U.S.)	1965
Decathlon	9,121 points	Y. Chuan Kwang (Formosa)	1963

Walking	<i>Time</i>	<i>Holder</i>	<i>Year</i>
30 miles	4 h. 2 m. 33 s.*	C. Hoehne (E. Germany)	1965
20,000 metres	1 h. 27 m. 5 s.*	V. Golulenichy (USSR)	1958
30,000 „	2 h. 17 m. 16.8 s.*	A. Yegorov (USSR)	1959
50,000 „	4 h. 10 m. 51.8 s.*	C. Hoehne (E. Germany)	1965

WOMEN

Running	<i>Time</i>	<i>Holder</i>	<i>Year</i>
60 metres	07.2 s.*	B. Cuthbert (Australia)	1960
		I. Bochkaryeva (USSR)	1960
100 yards	10.3 s.*	Wilma Rudolph (U.S.)	1961
440 „	52.4 s.*	J. Amooore-Pollock (Australia)	1965
100 metres	11.1 s.*	Wyomia Tyus (U.S.)	1965
		E. Klobukovaska &	
		I. Kirszenstein (Poland)	1965
200 „	22.7 s.*	I. Kirszenstein (Poland)	1965
400 „	51.9 s.*	Sin Kim Dan (N. Korea)	1962
800 „	2 m. 01.1 s.*	A. E. Packer (U.K.)	1964
Hurdling			
80 metres	10.3 s.*	Irina Press (USSR)	1965

Field Events	<i>Distance</i>	<i>Holder</i>	<i>Year</i>
High Jump	6 ft. 3 $\frac{1}{4}$ in.*	I. Balas (Rumania)	1961
Long Jump	22 ft. 2 $\frac{1}{4}$ in.*	M. D. Rand (U.K.)	1964
Discus Throw	59.70 metres*	Tamara Press (USSR)	1965
Javelin	204 ft. 8 $\frac{1}{2}$ in.*	Y. Gorchakova (USSR)	1964
Shot Put	18.50 metres*	Tamara Press (USSR)	1965
Pentathlon	5,246 points*	Irina Press (USSR)	1964

* Ratified Records.

SWIMMING

WORLD RECORDS

MEN

Free Style	Time	Holder	Year
100 metres	52.9 s.	Steve E. Clerk (U.S.)	1964
		E. Gottavales (France)	1964
200 "	1 m. 57.6 s.	D. Schollander (U.S.)	1964
400 "	4 m. 12.2 s.	D. A. Schollander (U.S.)	1964
800 "	8 m. 51.5 s.	I. M. Rose (Australia)	1962
1,500 "	16 m. 58.7 s.	Roy Saari (U.S.)	1964
Breast Stroke			
100 metres	1 m. 06.9 s.	G. Prokopenko (USSR)	1964
200 "	2 m. 27.8 s.	I. O' Brien (Australia)	1964
Butterfly			
100 metres	57.0 s.	L. A. Nicolao (Argentina)	1962
200 "	2 m. 06.6 s.	K. J. Berry (Australia)	1964
Back Stroke			
100 metres	59.6 s.	H. T. Mann (U.S.)	1964
200 "	2 m. 10.3 s.	J. R. Graef (U.S.)	1964

WOMEN

Free Style	Time	Holder	Year
100 metres	58.9 s.	Dawn Fraser (Aus.)	1964
200 "	2 m. 11.6 s.	Dawn Fraser (Aus.)	1960
400 "	4 m. 39.5 s.	M. Ramenofsky (U.S.)	1964
800 "	9 m. 36.9 s.	S. Finneran (U.S.)	1964
1,500 "	18 m. 30.5 s.	P. Caretta (U.S.)	1964
Butterfly			
100 metres	1 m. 04.5 s.	A. Kok (Netherlands)	1965
200 "	2 m. 26.4 s.	S. Stouder (U.S.)	1964
Breast Stroke			
100 metres	1 m. 17.2 s.	Svetlana Babanina (USSR)	1964
200 "	2 m. 45.4 s.	G. Prozumenshchikova (USSR)	1964
Back Stroke			
100 metres	1 m. 07.7 s.	C. J. Ferguson (U.S.)	1964
200 "	2 m. 27.4 s.	C. J. Ferguson (U.S.)	1964

INDIAN SPORTS

CRICKET

Ranji Trophy Winners

(A gold cup presented by the Maharaja of Patiala in memory of the famous Indian cricketer, Prince Ranjitsinji)

1934-35 : Bombay	1945-46 : Holkar	1956-57 : Bombay
1935-36 : Bombay	1946-47 : Baroda	1957-58 : Baroda
1936-37 : Nawanagar	1947-48 : Holkar	1958-59 : Bombay
1937-38 : Hyderabad	1948-49 : Bombay	1959-60 : Bombay
1938-39 : Bengal	1949-50 : Baroda	1960-61 : Bombay
1939-40 : Maharashtra	1950-51 : Holkar	1961-62 : Bombay
1940-41 : Maharashtra	1951-52 : Bombay	1962-63 : Bombay
1941-42 : Bombay	1952-53 : Holkar	1963-64 : Bombay
1942-43 : Baroda	1953-54 : Bombay	1964-65 : Bombay
1943-44 : Western India	1954-55 : Madras	1965-66 : Bombay
1944-45 : Bombay	1955-56 : Bombay	

Ranji Trophy Records

BATTING

- * 443 by B. B. Nimbalkar (Maharashtra), 1948.
- * 359 by V. M. Merchant (Bombay), 1943.
- 319 by Gul Mohammed (Baroda), 1946.
- * 316 by V. S. Hazare (Baroda), 1939.

BOWLING

Hat-trick—Baqā Zilani (N. India), 1934 ; Mubarak Ali (Nawanagar), 1936 ; C. Longfield (Bengal), 1937 ; S. N. Banerjee (Bihar), 1948 ; C. T. Sarwate (Holkar), 1948 ; V. B. Ranjane (Maharashtra), 1956 ; V. S.ulkarni (Bombay), 1963 ; S. Jhanji (U.P.), 1963.

India in Test Cricket

	Won	Lost	Drawn	Total
India <i>v.</i> England	.. 3	15	16	34
„ <i>v.</i> Australia	.. 2	9	5	16
„ <i>v.</i> West Indies	.. 0	10	10	20
„ <i>v.</i> New Zealand	.. 3	0	6	9
„ <i>v.</i> Pakistan	.. 2	1	12	15
TOTAL	.. 9	35	46	90

* Not out.

Inter-University Cricket Championship

(Rohinton Baria Cup)

(A gold cup presented by A. D. Baria of Bombay to perpetuate the memory of his son, Rohinton Baria, who died at an early age).

1950-51 : Mysore Univ. ; 1952 : Bombay Univ. ; 1953 : Delhi Univ. ; 1954-58 : Bombay Univ. ; 1959 : Delhi Univ. ; 1960 : Bombay Univ. ; 1961 : Mysore Univ. ; 1962 : Poona Univ. ; 1963 : Bombay Univ. ; 1964 : Maharashtra Univ. ; 1965 : Bombay Univ.

All-India School Cricket Championship

(Cooch-Behar Cup)

1965—West Zone

Duleepsinghji Trophy

(Inter-Zone Cricket Championship)

1961 : West Zone ; 1962 : West Zone ; 1963 : West & South Zones (*jointly*) ; 1964 : West Zone ; 1965 : West Zone.

Moin-ud-Dowla Gold Cup

1964—Associated Cement Company ; 1965—Hyderabad.

FOOTBALL

I.F.A. Shield

(Started in 1893—Played at Calcutta)

1955—Rajasthan ; 1956—Mohan Bagan ; 1957—Mahomedan Sporting ; 1958—East Bengal ; 1959—undecided ; 1960—Mohan Bagan ; 1961—Mohan Bagan & East Bengal (*joint holders*) ; 1962—Mohan Bagan ; 1963—B. N. Rly. ; 1964—undecided between Mohan Bagan and East Bengal ; 1965—East Bengal.

Rovers Cup

(Played at Bombay—Started in 1891)

1955—Mohan Bagan ; 1956—Mahomedan Sporting ; 1957—Hyderabad Police ; 1958—Caltex (Bombay) ; 1959—Mahomedan Sporting ; 1960—Andhra Police ; 1961—E. M. E. Centre (Secunderbad) ; 1962—East Bengal & Hyderabad Police (*jointly*) ; 1963—Andhra Police ; 1964—Mahomedan Sporting ; 1965—B. N. Railway (Cal.) ; 1966—Mafatlal Mills Sports Club (Bombay).

Durand Cup*(Played at Delhi—Started in 1888)*

1956—East Bengal; 1957—Hyderabad Police; 1958—Madras Regimental Centre; 1959—Mohan Bagan; 1960—Mohan Bagan & East Bengal (*jointly*); 1961—Andhra Police; 1962—no play; 1963—Mohan Bagan; 1964—Mohan Bagan; 1965—Mohan Bagan.

D. C. M. Football Competition*(Started in 1957—Played at Delhi)*

1957—East Bengal; 1958—Mahomedan Sporting; 1959—Hyderabad Police; 1960—East Bengal; 1961—Mahomedan Sporting; 1962—Madras Regimental Centre; 1963—E. M. E. Centre (*Secunderabad*); 1964—Mahomedan Sporting; 1965—Andhra Police (*Hyderabad*).

Kalinga Cup*(Played at Cuttack)*1965—Wari A. C. (*Calcutta*).**National Football Championship***(Santosh Memorial Trophy: Inaugurated in 1941)*

[*The Trophy donated in memory of the late Raja Manmatha Nath Chaudhury of Santosh, late President of the I. F. A.*]

1952—Mysore; 1953—Bengal; 1954—Bombay; 1955—Bengal; 1956—Hyderabad; 1957—Hyderabad; 1958—Bengal; 1960—Services; 1961—Railways; 1962—Bengal; 1963—Maharashtra; 1964—Railways; 1965—Andhra Pradesh.

Inter-University Football Championship*(Sir Asutosh Mukherjee Shield: Inaugurated in 1941)*

1946—Madras; 1947—Madras; 1948—Madras; 1949—Mysore; 1950—Calcutta; 1951—Nagpur; 1952—Aligarh; 1953—Calcutta; 1954—Osmania; 1955—Osmania; 1956—Osmania; 1957—Calcutta; 1958—Punjab; 1959—Osmania; 1960—61—Calcutta; 1962—Jadavpur & Mysore (*joint holders*); 1963—Calcutta; 1964—Calcutta; 1965—Calcutta.

All-India School Football Championship*(Subroto Mukherjee Cup)*

1962—Rani Rashmoni School (*Calcutta*); 1963—Batanagar School; 1964—Gorkha Military High School (*Dehra Dun*); 1965—Gorkha Military High School (*Dehra Dun*) and K. A. B. Vidyalaya (*Hazaribagh*)—*joint holders*.

HOCKEY**National Hockey Championship***(Rangaswami Cup : Started in 1928)*

1949-51—Punjab ; 1952—Bengal ; 1952—Services ; 1954—Punjab ; 1955—Madras & Services (*joint holders*) ; 1956—Services ; 1957—Railways ; 1958—Railways ; 1959—Railways ; 1960—Services ; 1961—Railways ; 1963—Railways ; 1964—Punjab ; 1965—Punjab.

Beighton Cup*(Played at Calcutta—Started in 1895)*

1951—Hindustan Aircraft (*Bangalore*) ; 1952—Mohan Bagan ; 1953-54—Tata Sports (*Bombay*) ; 1955—Western Railway (*Bombay*) & U. P. XI ; 1956—Services Hockets ; 1957—East Bengal ; 1958—Mohan Bagan ; 1959—Corps of Engineers (*Kirkee*) ; 1960—Mohan Bagan ; 1961—Central Railway ; 1962—East Bengal ; 1963—Central Railway ; 1964—Mohan Bagan & East Bengal ; 1965—Mohan Bagan & Customs.

Women's National Hockey Championship*(Lady Ratan Tata Cup—Started in 1938)*

1939—Calcutta ; 1940-46—no play ; 1947-49—Bombay ; 1950—M. P. ; 1951-52—Bombay ; 1953—Bombay & Bengal (*joint holders*) ; 1954-55—M. P. ; 1957-59—Bombay ; 1960-65—Mysore.

Inter-Railway Hockey Championship, 1965

Northern Railway.

Aga Khan Hockey Cup, 1965*(Played at Bombay)*

1965—Punjab Police.

Obaidullah Khan Gold Cup Hockey Tournament, 1965

Punjab Police.

Inter-University Hockey Championship, 1965*Men's*—Vikram University.*Women's*—Bombay University.**Jawaharlal Nehru Shield Hockey Tournament, 1965**

Sikh Regimental Centre.

GOLF**All-India Golf Champion, 1964**R. Pandey (*Bombay*).

Indian Open Golf Championship, 1965

P. G. Sethi.

All-India Ladies' Golf Champion, 1965

Mrs. Duncan-Smith.

BADMINTON**Asian Badminton Championship, 1965***(Played at Lucknow, U.P.)*

Men's Singles—Dinesh Khanna (India); *Women's Singles*—Angela Bairstowe (U.K.); *Men's Doubles*—N. Pornchim and C. Chumkum (Thailand); *Women's Doubles*—Angela Bairstowe (U.K.); *Mixed Doubles*—Angela Bairstowe (U.K.) and Tan Yee Khan (Malaysia).

Inter-State Badminton Championship, 1965*Men's (Rahimtoolah Cup)*—Railways.*Women's (Chadha Cup)*—Railways.**National Badminton Championship, 1965**

Men's Singles—Nandu Natekar (Maharashtra); *Women's Singles*—Meena Shah (Railways); *Men's Doubles*—Dipu Ghosh & Romen Ghosh (Railways); *Women's Doubles*—Meena Shah & Sarojini Apte (Railways). *Mixed Doubles*—Sobha Moorthy and A. I. Shaik (Maharashtra).

Inter-University Badminton Championship, 1965*Men's*—Osmania University.*Women's*—Bombay University.**Nehru Memorial Championship, 1965**

Men's Singles—Dinesh Khanna (India); *Women's Singles*—Miss Ursula Smith (Britain); *Junior Singles*—Gautam Thakkar (India); *Men's Doubles*—Tan Yee Khan and Yew Cheng Hoe (Malaysia); *Women's Doubles*—Miss Ursula Smith and Miss Angela Bairstowe (Britain); *Mixed Doubles*—Miss Meena Shah (India) and Yew Cheng Hoe (Malaysia).

TENNIS**National Tennis Championship**

Men's Singles—Jaideep Mukherjee; *Men's Doubles*—Naresh Kumar and S. P. Misra; *Women's Singles*—Miss T. Soome (USSR); *Mixed Doubles*—Miss T. Soome and A. Metreveli (USSR).

Inter-University Tennis Tournament, 1965*Men's*—Calcutta University.*Women's*—Bangalore University.

BILLIARDS**National Amateur Billiard Champions***(Started in 1931)*

- | | | |
|--------------------|-----------------------|-----------------------|
| 1951—Wilson Jones. | 1954-55—Wilson Jones. | 1962—Bob Marshall. |
| 1952—Tom Cleary. | 1956-57—C. Heerjee | 1963-65—Wilson Jones. |
| 1953—A. Driffield. | 1958-60—Wilson Jones. | |

National Amateur Snooker Championship

1965—Shyam Shroff.

National Chess Champions

1955—R. B. Sapre (Maharashtra); 1957—Ramdas Gupta; 1959—Mankand Saron (Madras); 1961—Mankand Saron (Madras); 1963—Faruq Ali; 1965—Russi Madan.

BASKETBALL**National Basketball Championship, 1965**

Men's (*Todd Memorial Trophy*): Services.
 Women's (*Basalat Iha Trophy*): West Bengal.

All-India Basketball Tournament, 1965*(L. R. G. Naidu Cup)*

Integral Coach Factory (Madras).

Inter-University Volleyball Championship, 1965

Men's—Osmania University.

Women's—Punjab University.

VOLLEYBALL**All-India Nehru Memorial Volleyball Tournament, 1965**
Andhra Pradesh Police.**Inter-University Volleyball Championship, 1965**

Men's—Osmania University.

Women's—Punjab University.

NOTABLE WORLD RECORDS

Water Speed Record—Donald Campbell (Eng.)—286.35 m.p.h. in *Blue Bird*, 1956.

Motor Cycle Record—Jonny Allen (U.S.), 214½ m.p.h., Sept. 1956.

Record Motor Car Speed—576.553 m.p.h. By Art Arfous (U.S.A.), Nov., 1965.

Record Speed and Altitude—by Russian Astronaut—17,000 miles per hour and at an altitude records for manned flight.

Highest Speed by a woman pilot—708,362 m.p.h. by Jacqueline Auriol in a Mystere jet, Paris, 1955.

Swimming—4.55 m.p.h. by John Davith (Australia), 1957.

Highest Speed by a Normal Aircraft—1,525.92 m.p.h. by Major J. W. Rogers, California, 1959.

Golf Ball—176 ft. per second.

Tennis Ball—220 ft. in one second by W. T. Tilden II in 1931.

Ski Jumping : Distance—316 feet by A. Samuelstuen (Norway), 1951.

Rifle—2,880 miles per hour (i.e., 4,100 ft. per second).

Record hand-shake—Rodney Bryant shook hands 20,103 times in 7 hours, 1963.

Leaping—16 ft. 10 in. by a frog named 'Lucky' (America).

Horse—37 ft. by steeplechaser, Chandler in England, 1947 (average is between 23 and 27 ft.).

Tightrope Walking—The world tightrope endurance record is 113 hours by Willi Pischler, 1955.

Diving—by Jack Brown, April 28, 1945, attained a depth of 550 ft.

Dividing, Highest—205 ft. 9 in. by Alex. Wickham (Solomon Islands).

Mountain Climbing—29,028 ft., highest known ascent on Mt. Everest by Sir Edmund Hillary and Sherpa Tenzing Norkey, 29th May, 1953.

Channel Crossing—Brojen Das (Pakistan), only man to have swum the English Channel six times, including both directions, a new record time within a period of only 12 days.

Rope Skipping—32,089 turns (without a break) by J. P. Hughes (Australia) on Oct. 26, 1953.

Underwater Staying—world record by Dr. Robert Keast, for 10 minutes 58.9 seconds on 18th March, 1956.

Non-stop Talking—world record by Kevin Sheean (Ireland), for 133 hours (5 days 13 hours), 28th November to 3rd December, 1955.

Piano-Playing—world record by Heinz Arntz (Berlin) on 1st May, 1955, by playing the piano non-stop, except for refreshment intervals, for 423 hours (17 days 15 hours).

Gliding : Distance—395.17 miles—R. H. Johnson (U.S.A.).

Height—12,100 ft.—W. S. Ivans (U.S.A.).

Speed—66.2 m.p.h.—R. Schreder (U.S.A.).

Deepest Dive—Bathyscape Trieste set a world record by diving to the bottom of the sea (37,800 feet) at Mariana Trench in the Pacific Ocean, with Prof. Piccard and Lt. Donwalch on 24th January, 1960.

Boxing—Joe Louis (U.S.A.)—only man to remain unbeaten in record 12 years (1937-49) as heavy-weight champion of the world.

DEFENCE INFORMATION

STRENGTH OF THE DEFENCE SERVICES OF COUNTRIES

Army.

<i>Afghanistan</i>	..	90,000 (4 Corps)	Annual call to the colours. Selective conscription, age- group 22-42.
<i>Algeria</i>	..	Being built up from re- patriated soldiers	
<i>Argentina</i>	..	85,000 (regulars), 50,000 (Territorial Guards), 200,000 National Guards).	
<i>Austria</i>	..	13,000	
<i>Belgium</i>	..	2 Inf. Divisions	Volunteers and annual call. Compulsory for men between 21 & 45 years of age— 9 years in the first line, 7 years in the second line, 7 years in the reserve.
<i>Brazil</i>	..	200,000 men	2,400 tanks, mostly T-54 & T-34.
<i>Bulgaria</i>	..	110,000 men grouped into motorised and tank divisions	
<i>Burma</i>	..	100,000	
<i>People's Republic of China</i>	..	2,250,000	120 divs., including 3 armour- ed divs. & 1 parachute div. Chinese also claim a People's Militia of 200 million, with 30% women. Actually conscript with no mention- able training in handling modern weapons.
<i>Cuba</i>	..	43,000	Armed militia of about 300,000 students, peasants & factory workers.
<i>Czechoslovakia</i>	..	150,000	12 motorised & 7 Tank divisions with 3,000 tanks.
<i>France</i>	..	750,000	Inc. 64,000 gendarmerie (Police).

*Federal Republic
of Germany* .. 250,000

13 divisions—3 armoured, 7 infantry, 2 air-borne and one mountain. The fighting unit is a self-contained brigade, of about 4,500 men having infantry, armoured battalions, anti-tank and anti-aircraft, reconnaissance units. Some of the battalions are equipped with guided missiles of U.S. origin, but obsolete American M48 tanks are being replaced by tanks of German design.

*German Demo-
cratic Republic* 130,000

2 armoured divisions with 2,500 Soviet (T34/76 & 85) tanks, 300 self-propelled guns and 4 motorised infantry divisions. In addition, there are 300,000 militiamen.

Indonesia .. 300,000

Equipments are of Russian origin.

Italy .. 10 Infantry Divisions
Japan .. 180,000

Divided into 5 corps & 13 divisions.

Poland .. 400,000

Compulsory military training for the age-group 19-50. 4 armoured, 9 motorised and 1 air-borne divs. with 2,750 tanks of USSR-make.

Rumania .. 2,00,000

About 1,00,000 semi-military forces of frontier guard, militiamen etc.

Turkey ..

16 infantry divisions, 6 armoured and 3 cavalry units equipped with the latest arms and partly motorised.

U.K. .. 229,000
U.S.A. .. 1,000,000

40% is deployed in 75 countries abroad, small arms include M-14 firing 7-62 mm. NATO cartridges, automatic or semi, M-60 Machine guns firing 550 rounds of NATO cartridges per minute, M-79 firing a 40 mm. grenade upto 400 meters.

Artillery is equipped with 105 mm. Howitzer (light), 155 mm. (medium), 175 mm. gun and 8" Howitzer (heavy) and 280 mm. (extra-heavy) anti-tank guided missiles have replaced 106 mm. recoilless anti-tank rifles. Anti-aircraft defence is entirely infra-red homing handled light rocket.

U.S.S.R. .. 2,500,000

Compulsory military service at 19, and 18 for those who have passed out from secondary schools. Active service varies between 2 to 5 years and reserve service upto 35, 45 & 50 according to fitness etc.

FIGHTING SHIPS OF COUNTRIES

Name of the Country	Aircraft-carriers	Cruisers	Destroyers	Submarines
Australia	.. 2	NIL	7+ 14	X
Burma	.. NIL	NIL	3+ 1	X
Canada	.. 1	X	9+ 54	X
Ceylon	.. X	X	2+ 2	X
China	.. X	X	4+ 17	24
France	.. 4	3	18+ 37	20
Germany (West)	.. X	X	8+ 11	3

	1	2	3+ 12	X
India	.. X	X	5+ 4	X
Indonesia	.. X	X	2+ 2	2
Israel	.. X	3	4+ 13	6
Italy	.. X	X	18+ 24	2
Japan	.. 1	2	12+ 11	5
Netherlands	.. X	X	4+ 7	8
Norway	.. X	1	6+ 2	1(?)
Pakistan	.. —	—	4+ 1	9
Poland	.. X	—	4+ 12	3
Portugal	.. X	—	4+ 6	10
Rumania	.. X	5	14+ 17	10
Spain	.. X	X	9+ 0	10
Turkey	.. X	X	4+ 4	9
U.A.R.	.. 9	8	39+ 55	85
U.K.	.. 38	47	362+340	157
U.S.A.	.. X	28	150+250	450
U.S.S.R.	..			

PUBLIC FINANCE

INDIAN CURRENCY—Indian currency system is controlled by the Government of India in so far as the metallic currency is concerned and by the Reserve Bank of India in respect of paper currency.

The external value of Indian rupee is maintained at a fixed level by the Government of India as approved by International Monetary Fund (I.M.F.). The present value of the rupee is 1s. 6d. In India rupee is a metallic coin, as well as paper money. The rupee notes are not like other notes which are issued by the Reserve Bank and carry the 'Promise to pay on Demand' notice. They occupy the same position and status as rupee coins and are issued by the Government of India. Paper Currency of India is issued in denominations of Rs. 2, 5, 10, 100, 1000, 5000 and 10,000.

The *decimal coinage* came into force in India from April 1, 1957. In the new set-up, the rupee remains as the standard coin and it is divided into 100 units. The unit coin was named *Naya Paise*.

From June 1964 there has been some changes in the Indian coinage. "Naya Paise" became plain "Paise". The coins without adjective are being minted. We have now one paise, two paise, three paise, five paise, ten paise, twenty-five paise and fifty paise.

Coin of Payment—The payments in Rupees and Dollars mean that in India you have to pay in Rupees for the things you buy in Rupees.

If you go to other countries, you have to pay for your things in the currency of those countries. In England Pounds and Shillings, in Russia Roubles, in U.S.A. Dollars. You can pay in any other currency if the seller is agreeable.

When India buys any goods from a country, she has to pay for them in the currency acceptable to that country. American Dollar and British Pound are acceptable to most of the countries in the world. The countries that accept the Dollar currency are known as the Hard Currency Areas and those that accept the Pound and other currency are known as Soft Currency Areas.

There are also countries which accept payment from India in Indian rupees. This money can be utilised only for purchases of goods and services in India. For instance, the U.S.A. gives foodgrains to India under the PL 480 programme on payment in rupees. The rupees thus accumulated are spent by the U.S. embassy on purchase of goods and services in India and a portion is given back to India as loan or grant for economic development.

For making payments in dollars, India has to earn dollars. This she does mainly by exporting her goods to the countries which pay in dollars.

INDIA'S PUBLIC FINANCE—Public Finance of India can be divided into three classes—(1) finance of the Government of India, (2) finance of the State Governments, (3) finance of the local bodies like municipalities, district boards, etc., or Local Finance. Under the Constitution of India, the power to raise funds is divided between the Centre and the States. According to the Constitution, the Government of India accounts are kept in two separate parts, namely, the *Consolidated Fund* and the *Public Account*. All revenues received, loans raised, and money received in repayment of loans by the Union Government form the Consolidated Fund of India. No money can be withdrawn from the Fund without the authority of an Act of Parliament. All other receipts and disbursements, such as deposits, service funds, remittances, etc., go to the Public Account, which is not subject to the vote of the Parliament. To meet unforeseen expenses, not provided in the Annual Appropriation Act, a *Contingency Fund of India* has also been established under Act 267(1) of the Constitution. Similarly, there are *Consolidated Fund*, *Public Account* and *Contingency Fund* for each State.

The Constitution provides for the appointment of a *Comptroller and Auditor-General of India* by the President to watch on the finances and accounts of the Union and the States. It is his responsibility to see that the expenses voted by Parliament or the Legislature of a State and laid down in the Appropriation Act are not exceeded and aried. The Constitution also enjoins that the expenditure of each Government should be approved by its Legislature.

Railways have their own funds and accounts and their budget is presented separately from General Budget to Parliament. The appro-

priations and disbursements of the Railway budget are also subject to the Parliamentary and audit control. The Railways contribute a net amount to the General Budget. It is a fixed dividend to Central revenue on the capital invested on them.

MINISTRY OF FINANCE—is responsible for the administration of the finances of the Central Government and for dealing with financial matters affecting the country as a whole. It arranges for raising the resources for carrying on the administration and regulates the taxation and borrowing policies of the Government. It deals with all problems connected with banking and currency and in consultations with the Ministries concerned, arranges for the proper utilization of the country's foreign exchange resources. In co-operation with the administrative Ministers, it controls the entire expenditure of the Government of India.

The Ministry is organised into five Departments: *Revenue, Expenditure, Economic Affairs, Co-ordination, and Company Affairs and Insurance*. Each Department has a number of organisations under its control.

1. **Department of Revenue**—is responsible for all Direct and Indirect Union Taxes. An important function of the Department is to advise the Government on Fiscal Policy. The Department is also responsible for the administration of the Gold Control regulations. The Department exercises the control vested in it through two statutory boards under it, namely, the Central Board of Direct Taxes and the Central Board of Excise and Customs. Following are the Direct Taxes—Income-Tax, Wealth-Tax, Estate Duty, Gift-Tax, Companies (Profits) Surtax, Expenditure-Tax. Various changes have been made regarding above taxes. Followings are the Indirect Taxes—Union Excise Duties, Customs and Central Excise Duties, Sales tax and Land Customs Duties.

2. **Department of Expenditure**—consists of following Divisions—Establishment, Civil Expenditure, Projects Co-ordination, Defence and Staff Inspection Unit.

3. **Department of Economic Affairs**—prepares the Government Budget, makes periodic assessments of foreign exchange needs and resources. This Department is also responsible for policies regarding currency, banking, financial corporations, and foreign exchange. It has following Divisions—Budget, Internal Finance, External Finance, Foreign Aid, Economic, and Administration.

4. **Department of Co-ordination**—was created in September, 1963. The Planning Division was transferred to this Department from the Department of Economic Affairs. In addition, it continued to deal with the subjects which were formally attended to by the Department of Co-ordination of the erstwhile Ministry of Economic and Defence Co-ordination. This Department deals with matters connected with State's finances, and Co-ordinates the work of Central assistance to States for their plans.

5. Department of Company Affairs and Insurance—has been created in the Ministry of Finance by the Presidential Order dated 18 November, 1964. This Department is in charge of the item regarding Company Law, so far under the Department of Revenue and Company Law and the items relating to insurance, so far under the charge of the Department of Economic Affairs. Under the new Central Cabinet headed by Sm. Indira Gandhi, the Department of Company Law has been transferred to the Ministry of Law.

Budget Division—prepares the Central Government's annual Budget (other than that for Railways) and supplementary and excess grants for presentation to Parliament. It deals with questions of public debt, market loans, small savings schemes and other investments. It also looks after the ways and means position of the Central and State Governments and their market borrowings. It administers Contingency Fund of India and carries out recommendations of the Finance Commission and matters of audit and accounting. The Division is in overall charge of the National Savings Organisation. The fixation of rates of interest on loans given by the Central Government, the administration of Central Treasury Rules and the submission of reports of the Comptroller and Auditor General to Parliament are also handled by the Division.

BUDGET—Towards the end of February every year the estimates of receipts and expenditure of the Central Government for coming financial year are presented to Parliament by the Central Government and before the Legislatures by the State Governments and no expenditure can be incurred without a specific grant being made for that purpose. This is known as *Annual Financial Statement*. A general discussion is made in both Houses of Parliament on the Annual Financial Statement. The estimates of expenditure other than that charged, are then placed before the Lok Sabha in the form of *Demands for Grants*. Ordinarily, a separate demand is made for each Ministry. All withdrawals of money from the Consolidated Fund is thus made by an *Appropriation Act* passed by the Parliament every year. The tax proposals of the Budget are embodied in a separate bill known as *Finance Act* for the year and then passed.

AUDIT—The Indian Constitution provides that the audit authorities who are independent of the executive, should scrutinise the expenditure of the Central and State Governments and ensure that this is strictly within the limits of their competence. The Constitution also enjoins that an account of the expenditure of each Government should be approved by its Legislature.

UNION AND STATE REVENUES & EXPENDITURE—The main sources of the Central revenues are: *customs duties, excise duties, corporation and income taxes, estate and succession duty* on non-agricultural estate and property and the earnings of the mint. Besides, the

Railways and Posts and Telegraphs contribute a share to the Central revenue. As much as 85 per cent of the total Union Government's revenue is derived from Customs and Union Excise duties and Corporation and Income taxes. Other incomes are Railway dividends, Posts and Telegraphs profits and profits from other commercial undertakings accruing to the Centre. Other sources are surplus profits of the Reserve Bank and the Mints, Civil Works (various public works owned and maintained by the Central Government) etc. Other miscellaneous sources also add to the revenue of the Centre.

The main heads of revenue of the States are—(1) taxes and duties levied by the State Governments, (2) Income from civil departments and civil workers, (3) Earnings from States undertakings, (4) Taxes shared by the Centre, (5) Grants received from the Centre.

Local bodies have following taxes—

Terminal Taxes, Octroi Taxes, Town Taxes, Taxes on property, Taxes on veterinary and animals, fees for services rendered, Licence Fees, water and electricity rates, cycle taxes, receipts from cattle pounds, grants from Governments, etc.

The *expenditure* of the Central Government is divided into Defence, Civil and Capital expenditure. The Defence expenditure is incurred on the army, navy and air force, and non-effective charges, which include pensions, annuities, etc., are paid by the Defence Department.

Civil expenditure covers expenditure on civil administration, debt services, refugee rehabilitation, food subsidies, etc. Under Capital expenditure are included the expenditure for the development of industries, railways, posts and telegraphs, aviation, river projects, etc. The Capital expenditure constitutes a separate capital budget which shows such items as expenditure on the discharge of permanent debt, advances and loans to the States.

Transfer of Resources from Centre to States—The devolution of resources from the Centre to the States is a salient feature of the system of federal finance in India. Apart from their share of taxes and duties, the State Governments also receive statutory and other grants as well as loans for various development schemes and rehabilitation purposes.

TAXATION ENQUIRY COMMISSION—The enormous rise of finance due to the increase of taxation within recent years could not satisfy the huge yearly expenditure gradually rising every year. So there was further need for mobilising the taxable capacity of the nation to meet the planned expenditure. The Commission held "India's taxation on the basis of its existing structure and rates has not fully tapped the taxable resources of the country." It therefore recommended the widening of the base and range of taxation, both direct and indirect, and re-adjustment of the rate structure. Since 1956, these recommendations of the Taxation Enquiry Committee are being carried out in both direct and indirect taxes. A number of new taxes are being gradually imposed.

Kaldor Proposals—After the report of the Committee Mr. Kaldor, the eminent British economist, was brought to examine the system of personal taxation in India. Mr. Kaldor reported in 1956 that “the present system of direct taxation in India is both insufficient and inadequate.” So he recommended a broadening of tax base so as to confine income-tax with annual tax on wealth, capital gains tax, gift-tax and a personal expenditure-tax. There were also other recommendations regarding evasions of income-tax, etc., etc. Most of the proposals are being gradually implemented by the Government of India.

FINANCE COMMISSIONS

Article 280 of the Indian Constitution lays down that the President shall, within two years from the commencement of the Constitution and thereafter, at the expiration of every fifth year or at such earlier time as the President considers necessary, constitute a *Finance Commission*. It shall be the duty of the Commission to make recommendations as to (a) the distribution of the net proceeds of income-tax between the Union and the States and the allocation of the States' share among the States, (2) distribution of other divisible Central taxes like Union excise duties, (3) amounts to be paid to the States of Assam, Bihar, Orissa and West Bengal in lieu of the assignment of system of the export duty on jute and jute products, (4) principles which should govern the grants-in-aid of the revenues of the States out of the Consolidated Fund of India, (5) the principles which should govern the distribution of the net proceeds of the estate duty in respect of property other than agricultural land. The First Finance Commission was presided over by K. C. Neogi, the Second Finance Commission by K. Santhanam and the Third Finance Commission by A. K. Chanda. The Fourth Finance Commission under the Chairmanship of Dr. P. V. Rajamannar was appointed on May 5, 1964.

FIRST FINANCE COMMISSION—was appointed in November 1951. The following are its recommendations—(1) the percentage of the net proceeds of income-tax to be allocated to the States should be raised from 50 to 55 p.c. of the divisible pool, (2) Excise duties on tobacco (including cigarettes, cigars, etc.), matches and vegetable products are the most suitable for distribution. The Commission recommended that 40 p.c. of the net proceeds of the duty levied on these items should be allocated to the States, (3) The Commission recommended grants-in-aid in the case of jute export duty and that these grants-in-aid should be of fixed sums, (4) Other types of grants-in-aid. The Commission recommended that (a) grants-in-aid are to be given according to the budgetary need of the States, (b) maintenance of the standard of social services is to serve as an important principle in the case of deciding grants-in-aid, (c) certain special burdens of national importance, like the consequences of partition would entitle a State to Central grants-in-aid, (d) the Central Government should pay grants-in-aid to less advanced States.

SECOND FINANCE COMMISSION—was appointed under Article 280 (1) of the Constitution in June, 1956 and submitted its report in September, 1957. The Commission made recommendations regarding the distribution of divisible Central taxes, the principles which should govern the grants-in-aid from the Centre to the States and the continuance or modification of the terms of agreements entered into by the Central Government and the States. The recommendations of the Commission provided for a devolution of about Rs. 140 crores per year as against an average sum of Rs. 93 crores received by the States under the First Finance Commission's recommendations.

THIRD FINANCE COMMISSION—was set up on Dec. 2, 1960 and submitted its report on December 14, 1961. The States' share taxes, duties and Central grants based on its recommendations have been carried out. It includes estate duty, grants in lieu of tax on railway passenger fares, income-tax, Union excise duties on 35 scheduled articles, additional excise duties in replacement of sales tax on 6 articles and grants-in-aid under substantive portion of Article 275 (1). The Government have accepted all the recommendations of the Commission except one.

FOURTH FINANCE COMMISSION—The appointment of the Fourth Finance Commission, headed by Dr. P. V. Rajamannar, retired Chief Justice of the Madras High Court, was announced by Mr. T. T. Krishnamachari, Union Finance Minister, in the Lok Sabha on May 5, 1964.

The other members of the Commission were : Mr. Mohan Lal Gautam, former U. P. Minister ; Mr. D. G. Karve, retired Deputy Governor, Reserve Bank ; Prof. Bhabatosh Datta, Director of Public Instruction, West Bengal and Mr. P. C. Mathew, Special Secretary in the Union Finance Ministry (Member-Secretary).

The Commission, which was the fourth to be constituted after the Constitution came into force, had under Article 280 (3) of the Constitution, to make recommendations to the President in regard to the following matters :—

(A) Distribution between the Union and the States of the net proceeds of taxes and

(B) The principles which should govern the grants-in-aid from the Centre to the States.

The President has, in addition, directed that the Commission should make recommendations on the following further matters :

(1) The assistance that may be granted by way of grant-in-aid under Article 275 to such States as are in need of assistance. In recommending this assistance, the Commission will be expected to take into account the revenue resources of the States during the Fourth Plan period other than those to be raised by way of additional taxation, the expenditure on the maintenance and upkeep of plan schemes completed during the Third Plan, the moneys required for the servicing of the debt, including the debt

to be incurred in the Fourth Plan, setting apart of the proceeds of estate duty on property other than agricultural land, over specified limits for the repayment of the States' debt to the Centre and the scope of economy consistent with efficiency to be effected by the States;

(2) Changes, if any, to be made in the principles governing the distribution among the States, under Article 269, of the net proceeds in any financial year of the estate duty in respect of property other than agricultural land;

(3) Changes, if any, to be made in the principles governing the distribution of the grants to be made available to the States in lieu of taxes on railway fares;

(4) Changes, if any, to be made in the principles governing the distribution of the net proceeds of the additional excise duties levied in replacement of the States' sales tax on the following commodities: textiles, sugar and tobacco; and

(5) The effect of the combined incidence of States' sales tax and Union excise duties on the production, consumption or export of commodities or products, the duties on which are shareable with the States and the adjustments, if any, to be made in the States' share of Union excise duties as a result of the increase in the States' sales tax on such commodities or products over a limit to be specified by the Commission.

The recommendations of the Commission will cover the five years from 1966-67 to 1970-71, which correspond to the Fourth Plan period.

Report of the Commission—The report of the Commission was placed on the table of the Lok Sabha on September 10, 1965 by the then Finance Minister, Mr. T. T. Krishnamachari.

The Fourth Finance Commission has not only raised the States' share of income-tax from 66-2/3% to 75% but has also raised the annual grants-in-aid to States from nearly Rs. 64 crores to Rs. 140 crores.

The Commission's recommendations, accepted by the Government, on the basis of the existing level of taxation would involve an additional transfer of Rs. 780 crores to the States during the Fourth Plan period.

Naturally, if the rates of income-tax and the excise duties go up during the Fourth Plan period or if more commodities are subjected to excise duty, the additional resources that the States will get from the Centre will exceed Rs. 780 crores.

While the States' share of the divisible pool of income-tax has been raised from 66-2/3% to 75%, the share of each State will continue to be determined on the basis of 80% on population and 20% on collection.

The Government has also accepted the Commission's recommendation that the States should share 20% of the yield from excise duty on all commodities instead of only 35 commodities as at present.

One of the members of the Commission, Mr. Mohanlal Gautam, a former Minister of U.P., has appended a minute of dissent relating to the

distribution of the additional excise duties on textiles, tobacco, and sugar, levied in lieu of States' sales taxes, and the non-inclusion of a provision for certain liabilities in the expenditure estimates.

The continuance of the existing formula, based partly on population and partly on percentage increase in sales tax revenue, has been favoured in the minute of dissent.

The Government has, however, accepted the majority recommendation that the excess over the guaranteed amount of Rs. 32.54 crores should be distributed among States on the basis of sales tax revenue realised in each State to the total sales tax collection in all the States taken together.

Apart from increasing the share to the Union Territories from 1% to 2% in the net proceeds of estate duty on property other than agricultural land, the Commission has suggested no other change in the principles governing the distribution of the duty.

The distribution of the grant payable to the States in lieu of their share of tax on railway passenger fares continues to be based on the principle of compensation so as to place them broadly on the same footing as they were before the tax was abolished. Although the amount of the grant will be fixed on the recommendation of the Railway Convention Committee, the percentage distribution among States has been fixed.

The Commission has also recommended a total grant-in-aid of Rs. 121.89 crores to 10 States as against the present grants-in-aid of Rs. 63.75 crores to 12 States. They are: Andhra Rs. 7.22 crores; Assam Rs. 16.52 crores; Jammu and Kashmir Rs. 6.57 crores; Kerala Rs. 20.82 crores; Madhya Pradesh Rs. 2.70 crores; Madras Rs. 6.84 crores; Mysore Rs. 18.24 crores; Nagaland Rs. 7.07 crores; Orissa Rs. 29.18 crores and Rajasthan Rs. 6.73 crores.

Additional grants of Rs. 6.29 crores will be paid to Andhra Pradesh, Rs. 2.58 crores to Mysore and Rs. 9.85 crores to U.P. for additional expenditure owing to the increase in pay scales and dearness allowance of their employees. The grant for U.P. has been fixed after taking into account the surplus of Rs. 17.02 crores, otherwise available to the State during the Fourth Plan period which will now disappear.

The Commission has also made a number of general recommendations relating to institutional provision for inter-Government consultations, public indebtedness of States, States' indebtedness to the Centre and such other matters. It has suggested an early inquiry by an expert committee to decide the principles of a scheme of amortization of public borrowing by the States.

The Chairman and one of the members have also added minutes in which general questions of financial relationship between the Union and the States and the role of the Finance Commission *vis-a-vis* the Planning Commission have been raised. The Government is of the view that these do not need any immediate decision and will be examined later.

PUBLIC DEBT

CENTRAL GOVERNMENT DEBT

The summary of the debt position of the Government of India over the Third Plan period (shown in the tables on the following pages) brings out the progressive growth in the magnitude of public debt, the outstandings of which rose from Rs. 4,968 crores at end-March 1961 to Rs. 7,179 crores by end-March 1965 and is expected to go up further to Rs. 7,838 crores by end-March 1966. At this level it formed about 70 p.c. of the total debt including public debt, small savings and other obligations. Over the Plan period, outstanding total public debt would show a rise of about Rs. 2,870 crores or 58 p.c.

The total assets position of the Government of India comprising capital outlay and loans advanced would show an excess over total liabilities of Rs. 675 crores as at the end of 1964-65 and as much as Rs. 963 crores by the end of 1965-66, the final year of the Third Plan.

Rupee Debt—of the Government of India advanced by Rs. 496 crores during 1964-65, compared to a rise of Rs. 600 crores during 1963-64.

Market Borrowings—Net market borrowings of the Union Government (*i.e.*, cash subscriptions less repayment in cash of maturing loans not tendered for conversion) during 1964-65 worked out to Rs. 100.4 crores. As a result of the new loan floatations (Rs. 295.98 crores @) and the funding of *ad hoc* Treasury bills (Rs. 50 crores) offset by redemption of maturing loans (Rs. 192.37 crores), the outstanding rupee loans of the Central Government during 1964-65 rose by Rs. 153.61 crores.

Loans and Golds for Defence—The Union Government has introduced three new schemes to mobilise the country's resources for defence. The first consists of 15-year National Defence Gold Bonds, which will get a tax-free interest at the rate of Rs. 2 per 10 grammes of gold per annum. They can be bought only in gold and will also be repaid in gold of standard purity in 1980. They are transferable.

The bonds are exempt from Capital Gains Tax, Wealth Tax and the Gold Control Act and the customs regulations. No inquiries will be made about the gold invested in the bonds nor will the identity of the investor disclosed.

The other two schemes are Defence loans. One carries an interest at 4.75 per cent and is redeemable after seven years. The other carries interest at the rate of 4.25 per cent and is redeemable after three years.

Treasury Bills—During the financial year 1964-65, Treasury bills showed a smaller increase (Rs. 111.6 crores) as compared to that in 1963-64 (Rs. 157.4 crores).

Annuity Deposit Scheme—From 1st October, 1964, a scheme has been inaugurated in all offices of the Reserve Bank and State Bank, where the deposits may be made in cash or by cheque. Accompanying the deposit money, will be an application for the issue of 10-year Annuity Deposit Certificate. These certificates are issued in denominations of Rs. 10/-, Rs. 100/- and Rs. 1000/-. The depositors will receive an annuity of Rs. 1.25 for every ten rupees, the rate of interest works out at a little over 4½ p.c. Payment of the annuities will be spread over 10 years. The depositors may either draw their annuities through their bankers or ask for remittance by postal money order. Individual depositors may nominate a person to receive annuities on the event of their death.

National Defence Fund—Total contributions to the National Defence Fund set up in October 1962 to receive voluntary contributions in cash, gold or gold ornaments for the defence efforts, upto end-March 1965 aggregated Rs. 59.34 crores.

CENTRAL AND STATE GOVERNMENT LOANS

(Outstanding as on March 31, 1965—in Thousands of Rupees)

Central Government ..	32,76,42,84	Maharashtra ..	99,89,74
Andhra Pradesh ..	67,54,35	Mysore ..	47,87,79
Assam ..	8,90,14	Orissa ..	36,97,51
Bihar ..	38,44,58	Punjab ..	11,00,65
Gujarat ..	25,91,50	Rajasthan ..	45,59,38
Kerala ..	26,88,25	Uttar Pradesh ..	1,51,15,09
Madhya Pradesh ..	32,31,06	West Bengal ..	55,94,19
Madras ..	89,99,27	Total of all States ..	7,38,43,52

(Report on Currency and Finance, 1964-65)

GOVERNMENT OF INDIA'S DEBT POSITION

(In Crores of Rupees)

Public Debt	As at the end of March					
	1961 (Revised Estimate)	1962 (Revised Estimate)	1963 (Revised Estimate)	1964 (Revised Estimate)	1965 (Revised Estimate)	1966 (Budget Estimate)
1. Internal						
(a) Rupee Loans ..	2,569	2,684	2,847	3,110	3,263	3,365
(b) Treasury Bills ..	1,263	1,182	1,415	1,360	1,404	1,394
(c) Others ..	290	296	306	311	320	315
Total (a+b+c) ..	4,122	4,162	4,568	4,781	4,987	5,074

2. External	..	846	1,111	1,379	1,809	2,192	2,764
Total Public Debt (1+2)	..	4,968	5,273	5,947	6,590	7,179	7,838
Small Savings	..	970	1,069	1,146	1,251	1,397	1,532
Other obligations	..	654	769	924	1,088	1,548	1,910
Total Debt	..	6,592	8,929	10,124	11,280	7,111	8,017

(Report on Currency and Finance, 1964-65)

RUPEE DEBT

(In Crores of Rupees)

	End-March	1961	1962	1963	1964	1965
Rupee Loans	..	2,571	2,688	2,841	3,114	3,268
Treasury Bills	..	1,106	1,175	1,300	1,382	1,444
Small Savings	..	975	1,061	1,136	1,263	1,375
Other Obligations	..	834	931	1,036	1,155	1,322
Total	..	5,486	5,856	6,313	6,913	7,409

(Report on Currency and Finance, 1964-65)

SMALL SAVINGS COLLECTIONS (NET)

(In Lakhs of Rupees)

	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66
	(1)	(2)	(3)	(4)	(R.E.)*	(B.E.)†
1. Post Office Savings						
Bank Deposits ..	4,506	3,555	665	3,919	4,000	4,200
2. National Defence						
Certificates ..	4,552	4,346	5,411	6,502	6,975	6,795
3. Defence Deposit						
Certificates ..	1,270	471	879	1,404	1,720	1,700
4. Cumulative Time						
Deposits ..	182	324	536	821	800	800
5. Annuity Deposits	49	25	20	7	5	5
Total ..	10,559	8,721	7,511	12,630	13,500	13,500

(Report on Currency and Finance, 1964-65)

DEBT POSITION OF STATES

(In Crores of Rupees)

	End-March	1961	1962	1963	1964	1965
		(1)	(2)	(3)	(4)	(5)
Permanent Debt	..	493	570	653	648	723

* Revised Estimate.

† Budget Estimate.

Floating Debt	..	..	42	50	25	43	40
Loans from the Central Government	..	..	2,016	2,314	2,677	3,112	3,623
Other Debt	..	..	52	64	77	95	120
Unfunded Debt	..	..	135	150	163	183	205
Total	..	..	2,737	3,148	3,595	4,082	4,712

(Report on Currency and Finance, 1964-65)

DEBT POSITION OF THE GOVERNMENT OF INDIA

(In Crores of Rupees)

			Internal Debt	External Debt	Total Debt
1951	..	..	2,467.60	32.03	2,499.63
1956	..	..	3,078.77	113.63	3,192.40
1961	..	..	5,486.32	760.96	6,247.28
1962	..	..	5,856.18	1,110.55	6,966.73
1963	..	..	6,312.68	1,379.03	7,691.71
1964	..	..	6,913.15	1,809.08	8,722.23
1965	..	..	7,408.75	2,192.23	9,600.98

(Report on Currency and Finance, 1964-65)

CURRENCY AND EXCHANGE

Indian currency system is controlled by the Government of India so far as metallic currency is concerned and by the Reserve Bank of India in respect of paper currency. But the Reserve Bank being now State-owned, it can now be said that the Government of India is the only currency authority in India.

Gold Parity Standard—India has now gold parity standard due to India's membership of the International Monetary Fund. India has to maintain a fixed quota of gold bullion and dollar currency with I. M. F. and the international value of India's currency is determined by I. M. F. with reference to the purchasing price of Indian rupee in terms of gold. The external value of Indian rupee is maintained at a fixed level by the Government of India with the approval of I. M. F. The present value of the rupee is 1s. 6d.

Indian Rupee—is a metallic coin as well as paper money. Rupee notes are not like other notes which are issued by the Reserve Bank of India and carry the "promise to pay on demand" notice. Rupee notes occupy the same position and status as rupee coins and therefore are issued by the Government of India.

Exchange Rate—Indian rupee is convertible into currencies of other

countries at a rate of exchange decided in consultation with I. M. F. The exchange is now expressed in terms of all the world currencies.

International Monetary Fund—This institution helps to fix the relative value of different currencies of the world. India fixed the value of her currency in terms of gold at 1s. 6d. By the same method, the value of the Indian rupee in terms of the currencies of all other countries was fixed directly instead of through sterling. This monetary standard is known as the international monetary standard (see also *Index*).

Inflation and Deficit Financing—The general price level of a country is determined by the amount of circulation of currency. If the volume of money supply increases disproportionately, inflation and rising prices are created.

It should be realised that money in circulation paid for goods and services are available to the community. The increase in the amount of money in circulation without a simultaneous increase in goods and services leads to inflation. In the case of deficit financing, the rise in prices is inflationary.

Circulation of Notes—The year's (1964-65) expansion of Rs. 152.9 crores (or 6.3 p.c.) in the circulation of notes raising the total circulation of notes to Rs. 2,564 crores was much smaller than the rise in 1963-64 (Rs. 212.0 crores or 9.6 p.c.).

Circulation of Rupee Coin—The expansion in the circulation of rupee coin, the bulk of which represents one-rupee notes issued by the Government of India, was slightly smaller (Rs. 11.5 crores) than that in the preceding year (Rs. 12.3 crores). As at the end of 1964-65, rupee coin in circulation stood at Rs. 180.0 crores.

Circulation of Small Coins—The circulation of small coins showed a smaller rise in 1964-65 (Rs. 7.53 crores) than in 1963-64 (Rs. 8.15 crores).

TOTAL NOTES ISSUED (DENOMINATION-WISE)

(In Lakhs of Rupees)

	Rs. 2	Rs. 5	Rs. 10	Rs. 100	Rs. 1000	Rs. 5,000	Rs. 10,000	Total
1956	31,92	176,76	609,88	591,00	55,17	9,78	6,28	1,480,80
1961	37,83	203,40	814,40	864,73	54,31	16,18	12,09	2,002,95
1962	37,38	201,71	840,42	932,91	62,82	21,73	10,09	2,107,06
1963	37,65	212,80	936,79	999,51	48,95	12,44	8,02	2,256,16
1964	38,00	229,16	1,030,82	1,109,33	50,29	14,34	8,85	2,480,78
1965	49,10	271,18	1,256,57	1,000,61	39,79	23,22	8,07	2,648,54

FOREIGN EXCHANGE RATES

(As on March 15, 1965)

<i>Country</i>	<i>Currency Unit</i>	<i>Indian Rupees per currency unit</i>	<i>Currency unit per Indian Rupee</i>
Australia	 Pound	.. 10.6667	0.0938
Austria	 Schilling	.. 0.1832	5.4600
Belgium	 Franc	.. 0.0952	10.5000
Burma	 Kyat	.. 1.0000	1.0000
Canada	 Dollar	.. 4.4048	0.2270
Ceylon	 Rupee	.. 1.0000	1.0000
Denmark	 Krone	.. 0.6894	1.4505
Ethiopia	 Dollar	.. 1.9048	0.5250
France	 New Franc	.. 0.9645	1.0368
Germany, West	 Deutsche Mark	.. 1.1905	0.8400
Ghana	 Pound	.. 13.3333	0.0750
Iraq	 Dinar	.. 13.3333	0.0750
Israel	 Pound	.. 1.5873	0.6300
Italy	 Lira	.. 0.0076	131.2500
Japan	 Yen	.. 0.0132	75.6000
Malaysia	 Dollar	.. 1.5555	0.6428
Mexico	 Peso	.. 0.3810	2.6250
Morocco	 Dirham	.. 0.9410	1.0627
Netherlands	 Guilder	.. 1.3154	0.7602
New Zealand	 Pound	.. 13.2424	0.0759
Norway	 Krone	.. 0.6667	1.5000
Pakistan	 Rupee	.. 1.0000	1.0000
Philippines	 Peso	.. 2.3810	0.4200
Sudan	 Pound	.. 13.6741	0.0731
Sweden	 Krona	.. 0.9205	1.0864
Syrian Arab Republic	 Pound	.. 2.1729	0.4602
U.A.R. (Egypt)	 Pound	.. 13.6741	0.0731
U.K.	 Pound	.. 13.3333	0.0750
U.S.A.	 Dollar	.. 4.7619	0.2100

NATIONAL INCOME

BASIC FACTS—In assessing the National Income of India, the following facts are to be taken into account:

(1) An undeveloped economy, the co-existence of unutilised or under-utilised man-power on one hand and of unexplored resources on the other.

(2) A pre-dominantly agricultural country, from which half of the country's national income is derived and which absorbs nearly three-fourths of its working.

NATIONAL INCOME ESTIMATES IN INDIA—Before the formation of the National Income Committee, several attempts were made by individual politicians, economists, etc., to estimate the national income of India. Dadabhai Naoroji's estimate of per capita income of India in 1868 was Rs. 20. Findlay Shirras estimated it in 1911 at Rs. 49. Dr. V. K. R. V. Rao's estimate in 1931-32 was Rs. 65 and in 1942-43 was Rs. 114. The Ministry of Commerce calculated it at Rs. 272 for 1947-48.

LATEST ESTIMATES—The National Income Committee has adopted the 1948-49 prices mainly for the following reasons:

(i) The year 1948-49 formed the bench-mark year for the official estimates of national income for which maximum data were collected, particularly for such sectors which involved 'income approach'.

(ii) The general price level in 1948-49 was fairly stable.

The years 1950-51 and 1951-52 were not 'normal' years. A Working Party set up by the Standing Committee of Departmental Statisticians in October, 1952, examined the feasibility of adopting a common base period for official index numbers and recommended the year 1952-53 as it was a year of more or less all-round stability. Accordingly, estimates of national income at 1952-53 prices for the years 1947-48 to 1958-59 were published by the Central Statistical Organisation in its Monthly Abstract of Statistics, July, 1960. The Second Plan targets of the real rise in national output were worked out at 1952-53 prices.

The national income of India in real terms rose by 7.3 per cent during 1964-65. This order of increase at constant prices is heartening news, since it is as high as that recorded during 1960-61, which was the highest since 1948-49.

This is a "quick" estimate. The Central Statistical Organisation, the department which calculates the national income, releases the "quick" estimate as soon as possible after the completion of the financial year (Apr. 1—Mar. 31) and the agricultural year (July 1 to June 30).

The "quick" estimate has necessarily to be based on partial data. It is provisional. (A revised estimate follows later). The idea in issuing the "quick" estimate is to give a quick and approximate appraisal of the performance of the entire economy in the preceding year at real terms, that is, at constant prices.

The increase of 7.3 per cent in 1964-65 shows that the growth tempo in the Third Plan increased considerably in the fourth year. In the first three years, the increases were 2.6 per cent, 1.9 per cent and 4.5 per cent. This gives an average of 4.1 per cent for the four years of the Third Plan.

The extent of rise or fall in national income depends in a large measure on the performance of the agriculture sector which contributes about 45 per cent of the national income. It is a sector which is subject to the whims of the monsoon. During the years 1961-62 to 1964-65, the percentage increases in the total national income and the income from agriculture sector at constant (1948-49) prices were 2.6 as against 0.2, 1.9 as against a fall of 2.1, 4.5 as against 1.9 and 7.3 as against 9.2 respectively.

Another important sector in the estimates of national income is mining and factory establishments (which registered an increase of 5.9 per cent in 1964-65). Increases in the industrial production are directly reflected in the constant price estimates for this sector.

The other sectors in the classification are communications, railways, organised banking and insurance, other commerce and transport and other services. Of these, other commerce and transport contributes about 12 per cent and other services about 18 per cent of the national income. During 1964-65, the percentage increases recorded in the above sectors were 13.0, 2.9, 7.4, 5.9 and 5.6 respectively.

Going back to agriculture, the value of output in agriculture (proper) increased by about 10.2 per cent which was due to an increase of 5 per cent in the production of rice and large increases of about 20 to 25 per cent in most of the other important crops.

In the case of mining and factory establishments, the combined increase for both mining and factory establishments, does not give a correct indication of the performance in each sector. For instance, during 1964-65 (which relates actually to the calendar year 1964) the increase in income from mining has been very small (1.5 per cent) and that from factory establishments 6.3 per cent. If mining also had registered a good increase, the overall contribution would have been much higher.

The contributions of individual sectors to overall percentage change in real income during 1964-65 were as follows:

<i>Sector</i>	<i>Percent- age contri- bution to total national income in 1963-64</i>	<i>Percent- age change in 1964- 65 over 1963-64</i>	<i>Contribution to the overall percentage change in 1964- 65 over 1963-64</i>
Agriculture (proper)	35.9	10.2	3.7
Mining and Factory Establishments	10.5	5.9	0.6
Communications	0.6	13.0	0.1
Railways	2.7	2.9	0.1
Organised Banking & Insurance	1.2	7.4	0.1
Other Commerce & Transport	15.4	5.9	0.9
Others	33.7	5.6	1.9
All Sectors	100.0	7.3	7.3

The following table presents the estimates of national income and per capita income at 1948-49 prices for the years 1950-51, 1955-56 and 1960-61 to 1964-65:

<i>Year</i>	<i>National income at 1948-49 prices (Rs. 100 crores)</i>	<i>Per capita income (in Rs.) at 1948- 49 prices (based on 1941, 1951 and 1961 population census figures)</i>
1950-51	88.5	247.5
1955-56	104.8	267.8
1960-61	127.3	293.2
1961-62	130.6	294.3
1962-63	133.1	293.4
1963-64*	139.1	294.8
1964-65@	149.3	314.4

*Preliminary

@Quick

TAXATION STRUCTURE

In physics, there is the absolute zero of temperature, known as Kelvin Zero, which is reached at -273.16°C ; nothing can, even in theory, be colder. As far as rates of taxation are concerned, India has almost reached Kelvin Zero.

It is most interesting to note how tax as a percentage of earned income in India compares with that in other advanced countries:

TAXATION IN ADVANCED COUNTRIES

(Married individual with two children)

(Percentages)

Income in Rs.	India (1964-65)	U.K. (1963-64)	U.S.A. (1962)	Canada (1962)	Japan (1962)
10,000	.. 6.9	0.4	nil	nil	12.9
20,000	.. 16.8	12.3	8.6	5.3	20.0
30,000	.. 26.1	18.2	12.4	9.6	24.6
40,000	.. 33.3	21.2	14.8	12.9	27.7
50,000	.. 39.5	23.0	16.2	15.8	30.2
75,000	.. 50.4	27.0	19.8	22.6	34.7
1,00,000	.. 57.1	32.1	22.8	27.1	38.2
1,25,000	.. 61.9	36.8	25.7	31.6	40.6
1,50,000	.. 65.7	42.4	28.7	34.6	42.6
2,00,000	.. 70.4	50.7	34.1	37.6	45.7
3,00,000	.. 75.2	62.1	43.0	44.6	49.4

There are no increases in other countries. On the contrary, in 1965, the rates for U.S.A. and Japan were lower than the rates in 1962 shown above.

The table below shows tax as a percentage of earned income in India compared with certain developing countries:

RATES IN OTHER DEVELOPING COUNTRIES

(Married individual with two children)

(Percentages)

Income in Rs.	India	Pakistan	Burma	Ceylon	Malaya	Brazil
10,000	.. 6.9	5.5	5.8	3.3	1.2	nil
20,000	.. 16.8	11.6	13.3	9.9	3.8	nil
30,000	.. 26.1	17.4	22.0	16.5	6.9	nil

TAXATION STRUCTURE

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Income in Rs.	India	Pakistan	Burma	Ceylon	Malaya	Brazil
40,000	.. 33.3	23.3	28.6	23.1	9.8	nil
5,000	.. 39.5	29.8	33.9	29.2	11.9	5.6
75,000	.. 50.4	42.8	43.5	41.3	15.3	8.2
1,00,000	.. 57.1	50.9	50.2	74.5	19.6	10.8
1,25,000	.. 61.9	55.7	54.8	76.8	23.6	12.7
1,50,000	.. 65.7	58.9	59.3	78.3	26.4	15.4
2,00,000	.. 70.4	62.9	65.0	80.2	29.8	19.6
3,00,000	.. 75.2	66.9	72.7	82.2	33.2	26.6

In both the above tables, the liability to make Annuity Deposits has been taken into account. The Annuity Deposit Scheme is nothing but deferred taxation. It enables the tax-payer to make a deposit with the Government, which is deducted from his total income in the year of deposit, but when the deposit is returned in annual instalments it is added to his income and bears full tax. The Government uses the tax-payer's money and pays interest on it at 4 per cent, when he could invest in first-class preference shares giving an annual yield of more than 8 per cent if he were to make his own investment. In the case of men with rising prospects in business, profession or employment, the Annuity Deposit Scheme involves a positive disadvantage since it makes the assessee liable to tax at a higher rate in subsequent years when his income is larger and the instalments of the Deposit are returned by the Government.

A company has to pay Income-tax and Super-tax at the rate of 50 p.c. if it is a company in which the public are substantially interested and at the rate of 60 p.c. if it is a company in which the public are not substantially interested. As regards companies which are engaged in certain specified industries, there is a 10 p.c. rebate, which brings down the effective rates of tax in their case to 45 p.c. and 54 p.c.

In addition to Income-tax and Super-tax, a company has to pay a Surtax on profits, broadly speaking, in excess of 20 per cent of the capital base. It has also to pay a Dividend-tax in respect of all dividends declared by it and not merely dividends in excess of a standard return on the share capital. The aggregate of Income-tax, Super-tax, Surtax and Dividend-tax can come to 70 per cent of the company's total income.

Besides, an individual shareholder has to pay the full Income-tax and Super-tax on the dividend income he receives from the company at a rate which can go as high as 88.12 per cent. The net result is that on the profits earned by a company and distributed by way of

dividend, the total incidence of tax between the company and the shareholder can go as high as 96 per cent.

CENTRAL TAXES—The Central taxes in India are broadly divided into two kinds, namely, *Direct* taxes and *Indirect* taxes. Direct taxes are those taxes the incidence of which falls upon the payee, and the Indirect taxes are those the incidence of which is transferred by the payee to the ultimate buyer or the consumer. The revenues of the Union Government are divided into tax revenues and non-tax revenues. *Tax revenues* include both Direct taxes and Indirect taxes. Direct taxes are: Income-tax (including Corporation Tax), Capital Gains tax, Expenditure-tax, Estate Duty, Wealth-tax, Gift-tax and Taxes on Railway Passenger Fares. All other taxes are Indirect taxes, such as Union Excise Duties, Customs Duties etc.

NON-TAX REVENUE OF THE UNION—The non-tax revenue income of the Union Government includes contributions from the Railways, Posts and Telegraphs, Currency and Mint (including profits of the Reserve Bank of India), forests, opium, irrigation, electricity, and road and water transport schemes.

CENTRAL REVENUES—The main sources of Central revenue are customs duties, excise duties levied by the Union Government, the corporation tax and income-tax (excluding taxes on agricultural income), profits transferred from the Reserve Bank, wealth-tax and expenditure-tax. Net profits earned by the railways and posts and telegraphs contribute to the Central revenue.

UNION EXCISE DUTIES—Excise duties are Indirect taxes. They are levied on (1) commodities produced within the country and (2) on narcotics, liquors, hemp, etc. Excise duty is charged on home goods during manufacture or before sale to home consumers. The former kind of excise duties is levied by the Government of India, while the latter kind is levied by the State Governments. Sugar, matches, motor spirit, cotton, tobacco, coffee, tea, vegetable oil are subject to excise duties.

STATES' REVENUES—The main heads of revenue in the States are the taxes and duties levied by the State Governments, share of taxes levied by the Central Government and grants received from the Centre. Other State revenues are: sales tax, State excise duties, registration and stamp duties and shares of income-tax and Central excise duties. These constitute more than four-fifths of the tax revenue and more than half of the States' revenue receipts. In addition to these, the States have property taxes, octroi and terminal taxes. In addition to these, there is devolution of Central revenue which means transfer of Central tax revenue to the States.

GIFT-TAX—The term 'gift' has been given a very wide range of transfers, namely transfer otherwise than for adequate considera-

tion, releases, discharge, surrender, forfeiture or abandonment of any debt or contract or actionable claim which is not found to be bonafide appropriation from or out of property belonging to one person by another without adequate consideration.

Rates of Gift-tax

- | | | |
|-----|--|-----|
| (1) | On the first Rs. 10,000 of the value of all taxable gifts .. | nil |
| (2) | On the next Rs. 10,000 of the value of all taxable gifts .. | 5% |
| (3) | On the next Rs. 25,000 of the value of all taxable gifts .. | 15% |
| (4) | On the next Rs. 1 lakh of the value of all taxable gifts .. | 25% |
| (5) | On the next Rs. 2 lakhs of the value of all taxable gifts .. | 40% |
| (6) | On the balance of the value of all taxable gifts .. | 50% |

Other exemptions from Gift-tax—(1) immovable property outside India; (2) savings certificate issued by the Central Government; (3) Life Insurance policies or annuities to any dependent other than wife subject to the maximum of Rs. 10,000; (4) gifts made to Government or any local authority; (5) gifts to charitable institution to which S. 15B of the Income-Tax Act applies; (6) gifts to any dependent relative on the occasion of his or her marriage upto Rs. 10,000; (7) Gifts to his/her spouse upto Rs. 1,00,000; (8) Gifts made under will or in contemplation of death; (9) Gifts towards Bhoodan or Sampattidan; (10) Gifts to one's children for their education; (11) Bonus, gratuity or pension by the employer to the employee or the dependents of the deceased employee. A notable feature of the Act is that in case of advance payment of the Gift-tax made, a rebate of 10 p.c. on such amount paid is allowed.

INCOME-TAX—See Budget, 1966-67 Section.

TAXES ON WEALTH—The Wealth-tax extends to the whole of India and has both territorial and non-territorial application. This is an annual tax and is levied on the net wealth as on the valuation date of every individual, Hindu undivided family and company.

Rates of Wealth-tax

Assessee	Exemption upto	Wealth exceeding Rs. 1 lakh.
*1. Individual	Rs. 1 lakh	On the next rupees five lakhs of the excess 1.0%.
		On the next rupees five lakhs of the excess 2.0%.
		On the next rupees five lakhs of the excess 3.0%.
		On the balance of wealth 4%.

<i>Assessee</i>	<i>Exemption upto</i>	<i>Wealth exceeding Rs. 2 lakhs</i>
2. Hindu Undivided Family	Rs. 2 lakhs	On the next rupees three lakhs of net wealth 0.5%. On the next rupees five lakhs of net wealth 1.0%. On the next rupees ten lakhs of net wealth 2.0%. On the balance of wealth 2.5%.

ESTATE DUTY—In case of property which passes or is deemed to pass on the death of the deceased, the rates of Estate Duty are as follows :—

Rates of Estate Duty

(1)	On the first Rs. 50,000 of the principal value of the estate	nil.
(2)	On the next Rs. 50,000 of the principal value of the estate	4 p.c.
(3)	On the next Rs. 1,00,000 of the principal value of the estate	10 p.c.
(4)	On the next Rs. 3,50,000 of the principal value of the estate	25 p.c.
(5)	On the next Rs. 5,00,000 of the principal value of the estate	30 p.c.
(6)	On the next Rs. 5,00,000 of the principal value of the estate	40 p.c.
(7)	On the next Rs. 5,00,000 of the principal value of the estate	50 p.c.
(8)	On the balance of the principal value of the estate	85 p.c.

CAPITAL GAINS TAX—This tax was first levied in 1946 and then abolished in 1948, but it was reimposed in 1956. No Capital Gains Tax, however, is payable by a person (not being a company) if the capital gains during the year are less than Rs. 5,000. It is also not payable if the capital gains together with the other income of the assessee does not exceed Rs. 10,000. The tax is imposed only on realised capital gains and not on the accrued profits. Capital gains arising from the sale of agricultural land or sale of personal effects and household goods are exempted from this tax. Persons owning residential houses are not liable to this tax, if they make capital gains on the sale of such a house provided the sale is effected for the purpose of acquiring another residential house. Capital gains are taxed at the rate of income-tax applicable to the total income after including therein only one-third of the capital gains.

ANNUITY DEPOSITS—apply to every person, being (i) an individual who is a citizen of India, (ii) a Hindu undivided family, (iii) an unregistered firm, (iv) an association of persons or a body of individuals, whether incorporated or not (other than a company or a co-operative society) and (v) an artificial juridical person (see also *Index*).

Rates of Annuity Deposits

- (1) In the case of any depositor whose total income does not exceed Rs. 25,000 Nil.
- (2) In the case of a depositor whose total income exceeds Rs. 25,000 but does not exceed Rs. 40,000 $7\frac{1}{2}\%$ of the adjusted total income.
- (3) In the case of a depositor whose total income exceeds Rs. 40,000 but does not exceed Rs. 70,000 10% of the adjusted total income.
- (4) In the case of a depositor whose total income exceeds Rs. 70,000 $12\frac{1}{2}\%$ of the adjusted total income.
- (5) Assesseees whose total income is between Rs. 15,000 and Rs. 25,000 can make annuity deposits to get tax-relief.

INDIAN ECONOMY

Indian Foreign Exchange Reserves

India's foreign exchange reserves, which had stood at Rs. 1,012,000,000 (£75,900,000) at the beginning of August 1963, rose to Rs. 1,060,000,000 by the end of 1963 and to Rs. 1,346,400,000 by March 20, 1964, but then fell to Rs. 950,000,000 by December 25, 1964, to Rs. 880,000,000 by January 15, 1965, to Rs. 805,000,000 by February 5, 1965, and to Rs. 773,000,000 (£58,000,000) by the end of June 1965.

The Indian Finance Ministry announced on June 4, 1965, that the Government had increased the Reserve Bank's gold stock to Rs. 1,337,400,000 (£100,300,000) from the normal level of about Rs. 1,170,000,000 (£87,750,000) in order to bring the Bank's reserves (gold and foreign exchange together) to a total of Rs. 2,110,800,000 (£158,310,000)—i.e. Rs. 110,800,000 above the statutory minimum of Rs. 2,000,000,000 required as backing for the paper currency.

Agriculture :

69.5 p.c. of the population of India earns its livelihood from agriculture. Land utilisation statistics are available for 73.88 crore acres or 91.6 p.c. of the total area.

About three-fourths of the cultivated land is used for food crops and the rest for cash crops.

Main food crops are rice (22 p.c. of the cropped area) and wheat (9 p.c. of the cropped area). The main cash crops are oilseeds, cotton, sugarcane and jute.

Of the total value of crops (Rs. 60,870 million at constant prices), 55 p.c. represented foodgrains in 1963-64.

Agriculture accounted for 46 p.c. of the national income in 1963-64.

During 1963-64, the total production of foodgrains increased to 79.4 million tonnes or about 1.0 million tonnes higher than in 1962-63.

The total imports of foodgrains in 1964 were higher at 6.27 million tonnes as compared to 4.56 million tonnes in 1963.

Industries :

According to the Annual Survey of Industries in India, 1960, India had 8,704 registered factories which are employing 50 or more workers with the aid of power or 100 or more workers without the aid of power. The productive capital of the factories totalled about Rs. 1,999.54 crores comprising Rs. 1,286.63 crores of fixed and Rs. 712.91 crores of working capital.

Organised factories employ 25,80,599 workers and 3,23,349 other than workers making a total of 29,03,948. The man-hours worked totalled nearly 591.2 crores. The salaries, wages and benefits of the employees came to Rs. 481.56 crores. Input amounted to Rs. 2,286 crores and output was of the order of Rs. 3,158.38 crores. Value added by manufacture worked out to about Rs. 864.38 crores. Organised factories and mines contributed Rs. 21,300 million (or 12 p.c. of total) to the national income in 1963-64.

Trade and Commerce :

Total value of India's imports and exports in 1964 amounted to Rs. 1,387.9 crores and Rs. 817.6 crores respectively as against Rs. 1,168.9 crores and Rs. 773.9 crores respectively in 1963.

Employment :

By December 1964, 8,789,000 workers were employed in the Public sector. In 1963, 4,372,000 workers were employed in factories.

Capital Issues :

Total consents given to Government companies during 1964 amounted to Rs. 167.5 crores as against Rs. 306.7 crores in 1963; their share in the total consents declined from 56.3 p.c. to 42.7 p.c.

Total consents for non-Government companies were lower at Rs. 224.8 crores during 1964 than Rs. 237.6 crores in 1963. Consents for the issue of shares (other than bonus) and debentures, which had dropped from the peak of Rs. 163.0 crores in 1962 to Rs. 141.5 crores in 1963, declined further to Rs. 138.9 crores in 1964.

The number of consents involving foreign participation fell sharply from 161 in 1963 to 90 in 1964 while the amount involved in such consents was also slightly lower at Rs. 59.3 crores as against Rs. 61.8 crores in the previous year.

Union Government Budget :

The overall budgetary deficit of the Government of India widened perceptibly from Rs. 115 crores in 1961-62 to Rs. 156 crores in 1962-63 and further to Rs. 167 crores in 1963-64, narrowed down to Rs. 80 crores

in 1964-65 (Revised) due to the buoyancy in tax receipts and also to the levelling off in defence expenditure.

Public Debt :

The outstanding public debt of India rose from Rs. 4,968 crores at end-March 1961 to Rs. 7,179 crores at end-March 1965.

Rupee debt of the Government of India advanced by Rs. 496 crores during 1964-65, compared to a rise of Rs. 600 crores during 1963-64.

Railway Finances :

The financial results of the working of Indian Railways for 1963-64 showed a substantial growth in gross traffic receipts from Rs. 567 crores in 1962-63 to Rs. 632 crores. The bulk of the increase was noticed under goods earnings. Ordinary working expenses (gross) of the Railways at Rs. 450 crores for 1963-64 recorded an increase of Rs. 32 crores. The net revenue before payment of dividend to General Revenues improved over the year by Rs. 22 crores to Rs. 145.19 crores.

Currency and Coinage :

During 1964-65, currency in circulation recorded a smaller rise of Rs. 171.5 crores as compared to Rs. 230.2 crores in 1962-63.

Natural Resources :

Coal occurring in seams of one foot or more thickness within a depth of 2000 ft. are estimated at 121,360 million tons.

Potential oil-bearing areas in India aggregate tentatively about 400 thousands square miles.

India's iron-ore reserves are assessed at 22,400 million tons—the largest deposits of iron-ore in the world or $\frac{1}{4}$ of the total world reserves.

Total estimated reserves of bauxite in India is 131 million tons.

Lignite deposits in and around Neyveli in Madras are estimated to be about 2,000 million tons.

India's manganese deposits are estimated to be 180 million tons, the third largest in the world.

There are three main mica belts (see *Index*) in India.

There are two important copper belts in India—Singhbhum in Bihar with an estimated reserve of 22.6 million tons and Khetri and Daribo in Rajasthan with proved reserves of 35.6 million tons.

The other mineral resources include: chromite 3 million tons, gold (ore) 4.4 million tons, ilmenite 300 million tons and gypsum 1130 million tons.

Irrigation and Power :

Average flow of India's river system is estimated to be 135,60 lakh acre-feet. Of this, approximately 45,00 lakh acre-feet of water is capable of being used for irrigation.

Of the total area under cultivation, nearly 16 p.c. is irrigated. While nearly 80 p.c. of the irrigated area is used for foodgrains, a relatively larger share of the recent increase in irrigation facilities has occurred to cash crops. On an average, two out of every five acres of irrigated land get water from canals, one from tanks and the remaining from wells and other sources.

Power potential studies of the river basins of India indicate an aggregate hydro-electric potential of the order of 4 crore kw. at 60 per cent load factor.

The capacity of electricity generation is about 8.3 million kw.

ECONOMY : INDIA AND PAKISTAN

The recent conflict between Pakistan and India has generated a great deal of interest in the relative economic capabilities of the two countries.

From the purely military view-point, the size and range of industrial capability are of crucial importance. India's capacity to produce materials of direct military significance is unquestionably superior to that of Pakistan.

Industry absorbs about 10 per cent of our working population and contributes 20 per cent of our national income compared to 8 per cent and 10 per cent respectively in Pakistan. We have nearly 4 million people employed in modern factory type industry while Pakistan has hardly 0.6 million.

Our industrial base is not only bigger, but more versatile and more self-sufficient. India has made rapid strides in building up industries as part of her programme for economic development. We produce 40 times as much sulphuric acid, 20 times as much fertilisers and 10-15 times as much of caustic soda and soda ash as Pakistan. We have capacity to produce 8.9 million ingots tons of steel; Pakistan has none.

With a bigger and more diversified industrial base, our economy is less dependent on foreign aid. Pakistan imports a much larger proportion of her needs of metals, machinery and chemicals. In 1964, Pakistan imported goods and services valued at Rs. 4,750 million; her exports were hardly Rs. 2,000 million. In other words, more than half of Pakistan's imports were financed by foreign aid. On the other hand, India met nearly 65 per cent of her import requirements by her own export earnings.

Our industrial strength is the result of our efforts during the last 15 years to promote economic development. These efforts were not intended to build a military machine, but to provide the essential basis for improving the living conditions of the people.

Since 1951, our farm output has risen by 60 per cent and production of modern industries has nearly trebled. Aggregate income has increased by nearly 75 per cent and per capita income by 25 per cent.

Pakistan's record on the other hand is not nearly as impressive. Between 1950 and 1960, her average rate of growth was about 2.5 per cent a year which is almost equal to the population growth.

India's progress since independence has been on the whole faster, and the average living standard in India is better than that in Pakistan.

I. Industrial Production, India and Pakistan, 1964-65

<i>Industries</i>	<i>Unit</i>	<i>India</i>	<i>Pakistan</i>
1. Sugar	thou. tonnes	2600	312
2. Cotton Yarn	"	958	236
3. Cotton cloth (mill-made)	mill. metres	4423 *	668 *
4. Paper including newsprint	thou. tonnes	526.5	116
5. Cement	"	9420 *	1474 *
6. Fertilisers (in terms of N)	"	230	11
7. Sulphuric Acid	"	681	16
8. Soda ash	"	280	28
9. Caustic soda	"	183	15
10. Coal	"	63990	1500
11. Crude petroleum	"	1653 *	469 *
12. Electricity installed	mill. Kw.	9	1.4
13. Electricity generated	bill. Kwh	25.9 *	2.9 *
14. Steel ingots	thou. tonnes	4400	negligible

II. Indicators of Standard of Living, India & Pakistan, 1964-65

National income (at current prices)	Rs. billion	172 *	38.4 *
Population	million	464 *	110 *
Per capita income	Rupees	371	349 *
Literacy rate	per cent	28	20
Mortality rate	per '000	15.8	16.7
Number per 100,000 population			
Doctors		17	14
Hospital beds		48	30
Nurses		8	3
Calories intake per capita per day (in 1961-62)		2040	1970
Per capita consumption of foodgrains	Kgs.	172.8 *	149.5 *
sugar	Kgs. of sugar equivalent	21.9 *	19.3 *
Cotton textiles (estimated from yarn)	Metres	16.0 *	13.2 *
Paper including newsprint	Kgs.	1.13	1.05

* Relates to 1963-64.

LAWS OF PARLIAMENT IN 1965

<i>Sl. No.</i>	<i>Title of the Bill</i>	<i>Act No.</i>
1.	The Income-tax (Amendment) Bill, 1965	1 of 1965
2.	The Appropriation Bill, 1965	2 of 1965
3.	The Appropriation (Railways) Bill, 1965	3 of 1965
4.	The Appropriation (Railways) No. 2 Bill, 1965	4 of 1965
5.	The Appropriation (Vote on Account) Bill, 1965	5 of 1965
6.	The Industries (Development and Regulation) Amendment Bill, 1965	6 of 1965
7.	The Kerala Appropriation Bill, 1965	7 of 1965
8.	The Kerala Appropriation (Vote on Account) Bill, 1965	8 of 1965
9.	The Armed Forces (Special Powers) Continuance Bill, 1965	9 of 1965
10.	The Finance Bill, 1965	10 of 1965
11.	The Appropriation (No. 2) Bill, 1965	11 of 1965
12.	The Kerala State Legislature (Delegation of Powers) Bill, 1965	12 of 1965
13.	The Kerala Appropriation (No. 2) Bill, 1965	13 of 1965
14.	The Representation of the People (Amendment) Bill, 1965	14 of 1965
15.	The Finance (No. 2) Bill, 1965	15 of 1965
16.	The Press and Registration of Books (Amendment) Bill, 1965	16 of 1965
17.	The Representation of the People (Second Amendment) Bill, 1965	17 of 1965
18.	The Gold (Control) Bill, 1965	18 of 1965
19.	The Aligarh Muslim University (Amendment) Bill, 1965	19 of 1965
20.	The Warehousing Corporations (Supplementary) Bill, 1965	20 of 1965
21.	The Payment of Bonus Bill, 1965	21 of 1965
22.	The Employees' Provident Funds (Amendment) Bill, 1965	22 of 1965
23.	The Banking Laws (Application to Co-operative Societies) Bill, 1965	23 of 1965
24.	The Kerala Appropriation (No. 3) Bill, 1965	24 of 1965
25.	The Kerala Appropriation (No. 4) Bill, 1965	25 of 1965
26.	The Appropriation (No. 3) Bill, 1965	26 of 1965
27.	The Appropriation (No. 4) Bill, 1965	27 of 1965
28.	The Appropriation (Railways) No. 3 Bill, 1965	28 of 1965
29.	The Appropriation (Railways) No. 4 Bill, 1965	29 of 1965
30.	The Goa, Daman and Diu (Extension of the Code of Civil Procedure and the Arbitration Act) Bill, 1965	30 of 1965

<i>Sl. No.</i>	<i>Title of the Bill</i>	<i>Act No.</i>
31.	The Companies (Amendment) Bill, 1965	31 of 1965
32.	The Insurance (Amendment) Bill, 1965	32 of 1965
33.	The Life Insurance Corporation (Amendment) Bill, 1965	33 of 1965
34.	The Press Council Bill, 1965	34 of 1965
35.	The Industrial Disputes (Amendment) Bill, 1965 ..	35 of 1965
36.	The Delhi Motor Vehicles Taxation (Amendment) Bill, 1965	36 of 1965
37.	The Appropriation (No. 5) Bill, 1965	37 of 1965
38.	The Delhi Land Reforms (Amendment) Bill, 1965 ..	38 of 1965
39.	The Indian Works of Defence (Amendment) Bill, 1965	39 of 1965
40.	The Railways (Employment of Members of the Armed Forces) Bill, 1965	40 of 1965
41.	The Taxation Laws (Amendment and Miscellaneous Provisions) Bill, 1965	41 of 1965
42.	The Cardamom Bill, 1965	42 of 1965
43.	The Kerala Appropriation (No. 5) Bill, 1965 ..	43 of 1965
44.	The Metal Corporation of India (Acquisition of Undertaking) Bill, 1965	44 of 1965
45.	The Coal Mines Provident Fund and Bonus Schemes (Amendment) Bill, 1965	45 of 1965
46.	The Indian Tariff (Amendment) Bill, 1965 ..	46 of 1965
47.	The Union Duties of Excise (Distribution) Amendment Bill, 1965	47 of 1965
48.	The Additional Duties of Excise (Goods of Special Importance) Amendment Bill, 1965	48 of 1965
49.	The Union Territories (Direct Election to the House of the People) Bill, 1965	49 of 1965
50.	The Goa, Daman and Diu (Absorbed Employees) Bill, 1965	50 of 1965
51.	The Estate Duty (Distribution) Amendment Bill, 1965	51 of 1965

NOBEL PRIZES, 1965

The value of the Nobel Prizes for the current year is about £19,450 each.

LITERATURE PRIZE

The Literature Prize, awarded by the Royal Swedish Academy of Literature, was this year awarded to the Russian novelist **Mikhail Sholokhov** (60), author of the famous novel *And Quiet Flows the Don*. Mikhail Sholokhov was born in the Don Cossack village of

Veshenskaya, where he still lives. His schooling ended in 1918, when he was 13, and after the Revolution he worked in a variety of jobs until he began writing at the age of 21. The first two parts of his epic novel *And Quiet Flows the Don*, which he began in 1926, were published in 1934 and brought him world-wide fame, the fourth and last volume appearing in 1940. It has been translated into over 40 languages.

MEDICINE PRIZE

The Medicine Prize, awarded by the Royal Carolinian Medico-Surgical Institute of Stockholm, was this year awarded jointly to three French scientists for important researches in the fields of genetics and microbiology, the recipients being **Professors Francois Jacob** (45), **Anrde Lwoff** (63) and **Jacques Monod** (55). All three work as a team at the Pasteur Institute in Paris.

M. Jacob was born at Nancy and is professor of cellular genetics; M. Lwoff, who is of Russo-Polish origin, was born in the Allier department and is professor of microbiology; while M. Monod was born in Paris and is head of the cellular biochmistry department at the Pasteur Institute.

PHYSICS PRIZE

The Physics Prizes, awarded by the Royal Swedish Academy of Science, was this year awarded jointly to a Japanese scientist and to two American scientists for their work in quantum electro-dynamics, the recipients being **Professor Shinichiro Tomonaga** (59), of the Tokyo University of Education; **Professor Julian Schwinger** (47), of Harvard University; and **Professor Richard Feynman** (47), of the California Institute of Technology.

CHEMISTRY PRIZE

The Chemistry Prize, awarded by the Royal Swedish Academy of Science, was this year awarded to an American scientist, **Professor Robert Burns Woodward** (48), for his "meritorious contributions to the art of organic synthesis."

PEACE PRIZE

The Peace Prize, awarded by the Nobel Committee of the Norwegian Parliament, was this year awarded to **United Nations Children's Fund (UNICEF)**.

MINERALS

INDIAN MINERALS—The mineral resources of India, though limited, are by no means inconsiderable and encompass a sufficient range of products that are necessary to make a modern civilised country. The minerals of strategic defence importance may be regarded to a considerable extent as adequate, though there is a serious deficiency in some key minerals, such as tungsten, tin, mercury, sulphur and petroleum. But in the basic metals—iron, manganese, aluminium, magnesium, chromium, and in coal fuel, the country is well-supplied. India's resources in the highly strategic atomic minerals—uranium, thorium, beryllium, zirconium, titanium and lithium—are sufficient. In the case of thorium, the reserves are of considerable magnitude. In uranium, enough reserves have been known to give present self-sufficiency for industrial power generation.

The reserves of all types of coal occurring in seams of one foot or more in thickness within the depth of 2,000 feet, are estimated at 1,21,360 million tons.

The iron ore reserves in India assessed at one-fourth of the total world reserves, are estimated at 2,100 crore tons.

The potential oil-bearing areas in India aggregate about 400 thousand square miles.

Chromite occurs mainly in Bihar, Orissa, Mysore, Madras and Maharashtra. The total reserves, proved and probable, have been estimated at 48 lakhs tons.

Lignite deposits in Madras, Rajasthan, Gujarat and Kashmir are estimated at 213 crore tons.

Manganese deposits of India are estimated to be 18 crore tons, the third largest in the world.

The deposit of bauxite is widespread in India. Its reserves are estimated at 25,000 lakh tons.

There are three main mica belts in Bihar, Rajasthan and Andhra Pradesh and two copper belts, one in Bihar and the other in Rajasthan.

Other known mineral resources of India are—chromite, 48 lakh tons; gold (ore); ilmenite, 35,00 lakh tons; gypsum, 98 crore tons. The proved reserves of gold ore in Kolar Gold-fields of Mysore are 37 lakh tons while those in Hutti gold mines in Raichur are 5 lakh tons. Gold occurs also at Ramgiri in Andhra Pradesh.

Among the refractories, there are deposits of 11,68 lakh tons of magnesite; deposits of kyanite, sillimanite and corundum also exist in different parts of the country.

FOUR CATEGORIES OF INDIA'S MINERAL RESOURCES—

The mineral resources of India can be divided into four categories: (1) minerals of which India's exportable surplus can dominate world market, (2) minerals of which the exportable surplus forms an important factor, (3) minerals in which it appears that the country is at present self-sustaining and (4) minerals for which India has to depend largely or entirely on foreign imports. To the first category belong iron ore, titanium ore and mica, while the exportable surplus under the second head includes manganese ores, bauxite, magnesite,

refractory minerals, natural abrasives, steatite, silica, gypsum, monumental granites, monazite, corundum and cement materials. In the number of minerals, namely, coal, aluminium ore, mineral pigments, sodium salts and alkalies, rare earths, beryllium, glass sand, nitrates, zircon and phosphates, the country is known to be self-sufficient. And lastly, the following are the minerals for which it has to depend solely on imports : copper, silver, nickel, petroleum, sulphur, lead, zinc, tin, fluorides, tungsten, molybdenum, platinum, graphite, asphalt and potash.

MINES AND MINERALS CONSERVATION—After independence, Government of India felt the great need for statutory rules for the conservation of mineral wealth and for the regulation and grant of mineral concessions. Thus the *Mines and Minerals (Regulation and Development) Act* was passed in September, 1957, as amended by Act 15 of 1958. It applies to all minerals including oil. It gives powers to the Central Government to frame rules for regulation of the terms and conditions of prospecting licences and grants of leases for the conservation and development of minerals and for the modification of existing licences and leases on payment of compensations.

The Industrial Policy Resolutions of the Government of India on April 6, 1948 and also of 1956 explicitly recognised minerals amongst the industries whose location must be governed by economic factors of all-India importance or which require considerable investment or a high degree of technical skill and must consequently be subject of Central regulation and control.

GOVERNMENT DEPARTMENTS—Consequent upon the re-organisation of certain Union Ministries announced in the President's Order No. CD—616/63 dated the 21st November, 1963, a separate Department of Mines & Metals was constituted under the Ministry of Steel, Mines & Heavy Engineering. To this Department was allocated the work pertaining to the Coal and Mines Divisions of the erstwhile Ministry of Mines & Fuel as also the subject of Metals dealt with previously by the Ministry of Industry.

Following is a detailed list of the subjects which are at present handled in the Department of Mines & Metals :—

A. Administration of the following offices :—

Geological Survey of India—was established in 1951. It is responsible for the preparation of the geological map of India, which forms the basis of all geological works. The Department has been recognised on a regional basis. The regional directorates have been set up and are functioning since 1961 : for the Eastern Region with headquarters at Calcutta, for the Northern Region with headquarters at Lucknow and for the Southern Region with headquarters at Hyderabad. Circle offices have also been set up under the three regions in almost all the States (See *Index*).

National Mineral Development Corporation Ltd.—was set up on the 15th November, 1958. It undertakes the exploitation of minerals in the public sector, excluding oil and natural gas and coal. Ramkheria Diamond Mines were taken over by the Corporation on March

17, 1960. The Corporation has been entrusted with the exploitation of iron ores in Kiriburu in Rourkela area for supply to Japan.

Indian Bureau of Mines—was created in 1948 with headquarters in Delhi, to function as a body of expert advisers to the Government of India on all matters relating to mineral development. The Bureau is the chief national agency for discharging the various duties under the Mines and Minerals (Regulation and Development) Act, 1958. It inspects mines to effect general improvement in mining methods, plans for the recovery of the largest possible quantity to conserve mineral wealth, eliminate waste in mining, processing and utilization, use modern methods of prospecting to locate mineral deposits.

A *Mineral Advisory Board* and *Regional Mineral Advisory Councils* were set up during 1953 to advise the Government on all matters concerning the mineral industry. It advises the Government on the export and import tariffs on minerals and mineral products. They are working on Kiriburu Iron Ore Project, Panna Diamond Mining Project, Khetri Copper Project, Bailadila Iron Ore Project, etc.

Neyveli Lignite Corporation Ltd.—envisages the mining of 3.5 million tons of lignite per annum out of which 1.5 million tons are to be utilised in a thermal power station with an installed capacity of 2,50,00 kw. (See *Index*).

Coal Council of India—makes suggestions in regard to the co-ordination of the programme of transport, coal and power, training of technical personnel and prospecting and drilling of areas from which coal will be raised in the Fourth Plan (See *Index*).

Coal Board—is a statutory body set up under Coal Mines (Conservation and Safety) Act, 1962. The important functions of the Coal Board are the promotion of measures for safety in coal mines and conservation of coal resources (See *Index*).

Central Laboratories—There are three Central Laboratories—*Petrological Laboratory* for the identification of minerals and rocks, *Palaeontological Laboratory* for carrying research on vertebrate and invertebrate fossils and *Chemical Laboratory* for carrying analytical experiments pertaining to various industrial materials, metallic minerals, water samples, etc.

B. 1. *Office of the Coal Controller, Office of the Controller of Mining Leases.*

2. *Production, supply, distribution and prices of coal and coke.*

3. *Public Sector Coal Projects, such as the National Coal Development Corpn. Ltd. and the Singareni Collieries Co. Ltd.*

4. *Setting up of coal washeries.*

5. *Fuel Efficiency Committee.*

6. *Administration of the Coal Mines (Conservation and Safety) Act, 1952.*

7. *Administration of the Coal-bearing Areas.*

8. *Sikkim Mining Corpn.*

9. *Manganese Ores (India) Ltd.*

MINING EDUCATION—*The Indian School of Mines and Applied Geology*, opened in 1926 at Dhanbad, imparts high-grade education in mineral engineering and applied geology. Besides the two main

subjects, the curriculum includes detailed instruction in allied and subsidiary subjects, such as, electrical and mechanical engineering, chemistry, fuel technology, metallurgy and assaying, physics, mathematics, and foreign languages. The successful students are awarded the diploma of Associateship of the Indian School of Mines in mining, engineering or applied geology. The new curriculum lays special emphasis on subjects like metallurgy, fuel technology, refractories and ceramics. A new Faculty of Mining and Applied Geology has been established.

Other major institutions for imparting mining education in India are—Banaras Hindu University (Varanasi), Bengal Engineering College, Sibpur (W.B.), Indian Institute of Technology, Kharagpur (W.B.) and Osmania University, Hyderabad. All these institutions confer degrees upon the students. There are a few minor ones, viz., Asansol Polytechnic etc. (See also *Education* Section).

DESCRIPTION OF MINERALS

Coal—(See *Index*).

Manganese— India ranks third in the world in the output of this mineral. The total estimated reserve of this mineral is 18 crore tons. Its chief use is in the manufacture of steel. It is also extensively used in the chemical industry and in the making of dry cell batteries. Chief producing States are Madhya Pradesh, Gujarat and Maharashtra. The manganese mines of Madhya Pradesh contain some of the best-known manganese ore deposits of the world. Deposits now being worked are in Singhbhum, Panchmahals (Gujarat), Nagpur, Balaghat, Bhandara, Chhindwara, Indore (Madhya Pradesh), Visakhapatnam (A. P.), Sundar (Madras), Shimoga (Mysore), Bonai, Keonjhar, Koraput, Patna State (Orissa) and Banswara (Rajasthan). Madhya Pradesh produces two-thirds of the all-India production.

Lignite— is a soft brown type of coal, retaining the texture of wood from which it originated. From it are obtained a number of valuable products, such as petroleum and diesel oils, waxes and hydrocarbon gases. Lignite quarry is situated at Neyveli in South Arcot district. It is 24 miles from Cuddalore and about 135 miles southwest of Madras. Lignite also occurs in Rajasthan, Gujarat and Kashmir.

The *Integrated Neyveli Project* envisaged the mining of 3.56 million tonnes of lignite per annum to be utilised for (1) the generation of thermal power, production of nitrogenous fertilizers in the form of urea and manufacture of carbonised lignite briquettes for use as domestic and industrial fuel.

Gold— is mined in Kolar in Mysore State, from where 95 p.c. of India's gold comes. India's production of gold is only about 2 p.c. of the total world production (excluding U.S.S.R.). The only other working mine, Hutti in Kerala, produces small quantities of gold. Gold-bearing veins are also known to exist in Dharwar district of Mysore, Anantapur district of Andhra, at Wynaad in Madras and at Lowa in Manbhum district of Bihar. Alluvial gold is widely distributed.

buted in many parts of the country—Assam, Bihar, Orissa, Madhya Pradesh, Punjab, Uttar Pradesh, Kashmir and West Bengal, but the only sources of gold of any type are at Kolar and Hutti.

By Kolar Gold Mines Acquisition Act, 1956, the Government of Mysore acquired the companies, namely, Mysore Gold Mining Co., KGF Ltd., Champion Reef Gold Mines of India, Nandidrug Mines Ltd., and Kolar Mines Power Station Private Ltd.

Mica—There are three mica belts : 1,500 square miles in Bihar, 1,200 square miles in Rajasthan and 600 square miles in Andhra Pradesh. Mica is an indispensable item in the manufacture of electrical and technical appliances and in the construction of motor cars, aeroplanes, radio-stores, flat-irons, window panes and many other products. India supplies about 80 per cent of the world's requirements of good-quality mica.

The next important use of mica is in the shape of micanite by electrical engineers, colliery companies, manufacturers of iron, steel and electrical apparatus. Waste and scrap mica is ground for wall-paper, paints, rubber industry, etc. The best quality of mica, perhaps the best in the world, comes from Bihar.

Petroleum—(See *Mineral Oil Section*).

Iron—(See *Iron & Steel Section*).

Salt—With a coast-line of about 5,690 km., inland sources in Rajasthan and Little Rann of Kutch and the rock salt mines in Mandi, India has possibilities of attaining a high position among the salt-producing countries of the world. India now claims to be self-sufficient in all qualities of salt, with the exception of rock variety. Salt is produced by solar evaporation on almost all the coasts of India, but particularly on the south-west and near Bombay. The principal salt-producing areas are located in Saurashtra, Madras, Maharashtra, Rajasthan, Kutch, Kerala and Orissa. The only one source of rock salt is at Mandi in Himachal Pradesh, which produces annually one lakh maunds of crude rock salt. Besides the existing model farm and Salt Research Station at Wadala in Bombay, Central Salt Research Institute was established in 1954 at Bhavnagar in Saurashtra. The principal centres of salt manufacture are as follows : (1) *Marine Salt Works*—(a) Saurashtra and Kutch (Bhavnagar, Jaffrabad, Jamnagar, Lavanpur, Porbandar, Bharai and Kandla), (b) Maharashtra (Dharaana, Bhoysandar, Bhandup, Uran and Mithapur), (c) Madras (Nanpada, Pennukuduru, Madras, Cuddalore, Adirampatnam and Tuticorin), (b) Orissa (Puri, Huma, Gokhurdakda and Sumadi), (e) West Bengal (Contai), (f) Kerala—along the coast ; (2) *Salt Mines*—Salt mines in Mandi (Himachal Pradesh) ; (3) *Inland sources*—(a) Rajasthan (Sambhar, Dudwana and Pachbadra), (b) Bombay & Saurashtra (Kharaghoda and Kuda) and (c) Rann of Kutch.

Ilmenite—One of the most striking features of India's mineral industry is the rapid rise in the production of *ilmenite*. India has now become the world's leading producer of this metal. It is the whitest of all substances and will replace lead more and more in the manufacture of white pigment. It occurs along the beach-sands on the

eastern and western coasts of India. The total reserves are estimated at 3,500 lakh tons.

Monazite—is available on Kerala and Coromondal coasts, existing in the form of beach-sands in association with ilmenite and is perhaps the largest and the richest in thorium in the world. It also contains a small quantity of uranium. In order to conserve supplies for atomic energy development, exports are now prohibited under Sec. 3 of the Atomic Energy Act, 1948. A factory for processing over 1,500 tons a year of monazite beach-sands, has been recently set up by the Government of India at Alwaye (Kerala).

Orches—are well-known as mineral earth pigments. Occurrences are fairly widespread in India; chief producing areas are Madhya Pradesh, Vindhya Pradesh and Saurashtra. The entire production is retained for internal consumption.

Saltpetre—occurs as natural efflorescence in extensive areas in Bihar, U.P. and Punjab. Crude saltpetre is used as manure, while refined saltpetre is consumed in the manufacture of fire-works, blasting-powder, soaps and matches and in glass, ceramic and tanning industries.

Zircon—This rare metal has come into prominence very lately for use in atomic energy and in alloy metallurgy. The main source of the mineral zircon is found associated with the ilmenite beach-sands on Malabar and Coromondal Coasts.

Zinc—Zawar mines in Rajasthan are the only important source of zinc ore in India, which are being worked to meet much of her needs in the near future. In November 1965, further zinc reserve was found in Mamandur area in South Arcot district of Madras. India's resources are, however, poor.

Beryl—is found in small quantities in certain rocks which contain, generally, mica mines. India is a large producer of beryl, chiefly found in Rajasthan, Madras, Kashmir and Bihar.

Chromite—It occurs mainly in Bihar, Orissa, Mysore, Madras and Maharashtra.

Dolomite—This is available in large quantities from Birmitrapur and Panposh areas in Sundergarh district of Orissa, where 90 p.c. of the mineral is produced. The other main producing States are Bihar and Madhya Pradesh. Deposits of dolomite of useful quality, used in the steel melting industry, have been discovered near Bari village in Mirzapur district of U.P. in December, 1965.

Magnesite—is valuable to cement, glass, paper, rubber, cosmetics, refractories and aircraft industries. India's magnesite deposits are in Bihar (Singbhum), Kashmir, Madras (Salem), Mysore, Rajasthan and Uttar Pradesh (Almora). By far the largest and the best magnesite deposits in India occur in the Salem district of Madras State.

Bauxite—The ore from which aluminium is extracted is called *bauxite*. The reserves and potential resources in India constitute 1/60 of the total world resources. Although India has limited natural resources of non-ferrous metal ores, extensive deposits of bauxite occur in widely separate areas, such as Bihar, Madhya Pradesh, Orissa, Madras, Mysore, Gujarat and Jammu & Kashmir. In spite of large

number of occurrences of bauxite in various parts of the country, the producing fields are restricted to Ranchi (Lohardaga) in Bihar, Jabalpur (Katni) in Madhya Pradesh, Kaira in Gujarat, Salem in Madras and Belgaum in Mysore.

Cement—The ingredients of cement are all available in abundance in India. The principal cement-producing centres are Porbandar in Gujarat, Lakheri in Rajasthan, Jabalpur and Katni in M.P., Guntur in Madras, etc.

Kyanite—Perhaps the largest deposits of Kyanite in the world are found in India, which is the most important of the minerals used in ceramic industries. Good workable deposits of kyanite occur in Seraikella and Kharswan in Singhbhum district of Bihar and smaller deposits in Mayurbhanj district of Orissa, in Nellore district of Madras and in the Hassan district of Mysore. The Lapsa Buru deposit of Kharswan (Bihar) is the largest in the world and is the principal centre of production.

Feldspar—Workable occurrences of feldspar are located in Maharashtra, W. Bengal, Bihar, M.P., Madras, Mysore and Rajasthan. The entire output is utilized mainly in the ceramic industry.

Copper—There are two important copper belts in India, namely, Singhbhum in Bihar and Khetri and Daribo in Rajasthan. Singhbhum copper belt is the principal source at present. Indian Copper Corpn. Ltd. has been working the mines at Mosabani and smelting copper at Moubhandar near Ghatshila in Singhbhum for nearly 4 decades. Reserves of 3.56 crore tons with 1 p.c. content have recently been found in Khetri area, while probable reserves with 0.8 p.c. copper content and above have been estimated in Singhbhum. Besides, reserves of copper ore proved in Sikkim are expected to be worked jointly by the Sikkim Durbar and Govt. of India. The reserves of copper had been estimated at 562,000 tonnes, the average grade of ore was estimated to contain 2.46% copper.

Limestone—is used principally in the manufacture of cement and for constructional purposes and also as a flux in the melting of iron and lead ores—is found in Rhotasgarh in the Sahabad district of Bihar, at Katni in M.P., at Bundi, Jodhpur and Shirohi in Rajasthan, in Rewah and Mahari States of Madhya Pradesh. The known deposits of limestone are estimated at 500 crore tons, enough to meet the country's needs for the next 75 years.

Tungsten—Tungsten ores are found in Jodhpur and Bikaner, but the reserves of this ore are small, calculated to be able to supply local needs of ferro-tungsten alloy industry.

Bentonite—is a valuable clay similar in its properties to Fuller's Earth. It occurs in limited quantities in Rajasthan, Bihar and Kashmir.

Gypsum—Its importance lies in its use as a raw material in the manufacture of ammonium sulphate. Rajasthan contains largest reserves of 92 crore tons of gypsum out of the country's total reserve of 98 crore tons. Other States where it occurs are Madras, U.P. and Jammu & Kashmir.

Apatite—is one of the non-ferrous minerals of India. Reserves of apatite-bearing rocks are placed at 7 lakh tons in Bihar, 80 lakh tons in Madras and 1.6 lakh tons in Andhra Pradesh.

Sulphur—The country has no sizable source of native sulphur, but ores of base metals are mostly sulphates and a large amount of sulphur is released as by-product in their treatment in metallurgical works, which could be collected. The present production of sulphur in India is almost negligible, the country depending mostly on imports.

Steatite—is also known as soap-stone, post-stone, talc and in its powdered form as 'French chalk'. It is one of the most variously used industrial minerals. It is available in Rajasthan and Madras.

Vanadium—There are large reserves of vanadium-bearing titaniferous iron ores in Singhbhum and Mayurbhanj.

Sillimanite—is a mineral used in the manufacture of furnace lining in the iron and steel and glass and ceramic industry. It is almost a monopoly of India. Deposits of sillimanite are known to occur in Kerala, Madhya Pradesh and Mysore. The world's largest concentration of sillimanite occurs in the Khasi Hills (Assam).

Clays—India has abundant sources of clays which are distributed in almost every State. Besides the deposits of China clay, other clays are also widespread. Deposits of China clay occur in Bihar, Assam, Maharashtra, Hyderabad, Madras, Mysore and Kerala. The entire production is used for internal consumption in pottery, building bricks, in the manufacture of cement and soaps and for colour washing.

Pyrites—The deposits of pyrites from which sulphur could be obtained, exist at Ajmor (Bihar), Wynaad (Madras), Ingladhah (Mysore) and Tara Devi (Simla hills, H.P.).

Corundum—is found in Assam, Madhya Pradesh, Mysore and Rajasthan, the reserves in Madhya Pradesh alone being of the order of 4 lakh tons, including one lakh ton of high-grade mineral.

Fuller's Earth—is chiefly obtained from Bikaner and Jodhpur in Rajasthan and a little is also obtained in M. P. Entire production is used for internal consumption.

Graphite—occurs in small quantities in various parts of India, namely, Ajmer, Hyderabad, Madhya Pradesh, Madras, Mysore, Orissa and Kerala. The mineral is mainly used in foundry, and in pencil and paint industry in India.

Antimony—There are small deposits of antimony in Lahaul in Kangra district of Punjab. The Star Metal Refinery continues to be the only manufacturer of antimony in the country.

Calcite—Calcite deposits are found in Saurashtra. They are also found in Nawanagar, Porbandar, Junagarh and Amreli. The most important of the deposits are found in Amreli. It is used for the manufacture of calcium carbide, bleaching powder, as a flux in metallurgical operations, for imparting glaze on pottery and for making industrial lime.

Lead—India contributes about 0.2 p.c. of the estimated world output of lead ore. Lead deposits now being exploited in India, are located at Zawar in Udaipur and at the Banjavi mines in Jaipur. The commercial production of lead ingot was taken up first by the Metal

Corpn. of India Ltd. in 1942-43. They manufacture lead ingot at its smelter at Tundoo, near Dhanbad in Bihar.

Titanium—The most important deposits of titanium minerals worked in India lie in Kerala in five stretches on the south-west coast—Nindakara (north of Quilon). Anjengo-Varkala (south of Quilon), Kovilam (south of Trivandrum), Muttampudur (near Colachel) and Cape Comorin-Liparum (on the eastern coast of Tirunelveli district).

Asbestos—India has a limited resources of asbestos, mainly in Andhra, Bihar, Mysore and Rajasthan. Of the two chief varieties found in India, the chrysolite asbestos, which is the flexible variety amenable to spinning and hence more valuable, is found in Cuddapah (Andhra), while other deposits yield the tremolite type, which is less flexible.

Barytes—This mineral is used mainly in paint and petroleum industries in India. Deposits of barytes occur in Madras, Uttar Pradesh, Rajasthan and in the Anantapur and Cuddapah districts of Andhra Pradesh.

Thorium—India's reserves of thorium, a potential atomic fuel, are on a scale of world importance. The known reserves of this metal in the coastal sand deposits are estimated at nearly half-a-million tons of thorium oxide. The source of this atomic metal is the mineral monazite which occurs in the ilmenite sands on Kerala and Madras coasts and in parts of Hazaribagh plateau in Bihar as a surface placer.

Precious Stones—Actual diamond mines are in Panna (Madhya Pradesh) over an area of 750 sq. miles. Geologically, the rock formation resembles that of Kimberly in South Africa. A daily output of 1,895 carats could be expected when the mines are fully mechanised. 4,870 diamonds weighing 1066.40 carats and valued at Rs. 6.38 lakhs had been recovered during the course of prospecting operations. An expenditure of Rs. 26.59 lakhs had been incurred on prospecting operations and ancillary works. *Sapphires* of a very clear blue colour are obtained in Kashmir at an altitude of 14,000 ft. *Garnets* of a rich deep purplish red are found in Barwar in Kishengarh and the adjoining tracks of Jaipur (Rajasthan). *Emeralds* are chiefly obtained from Udaipur and Ajmer (Rajasthan).

PRODUCTION OF IMPORTANT MINERALS

	1963	1964
Iron Ore (million tonnes)	14.8	14.9
Manganese Ore (million tonnes)	1.1	1.2
Copper Ore ('000 tonnes)	474	473
Lead Concentrates ('000 tonnes)	5.9	6.2
Zinc Concentrates ('000 tonnes)	10.6	10.7
Gold ('000 kgs.)	4.3	4.6
Gypsum ('000 tonnes)	1188	878
Magnesite ('000 tonnes)	235	205

IRON AND STEEL

IRON IN INDIA—When Alexander the Great retreated from India, he took with him a precious gift which was neither gold nor diamond, but it is recorded that King Porus presented him 30 pounds of high-quality iron. There are several ancient objects of non-rusting iron still available in India. One of these is the famous Iron Pillar in the compound of Kutub Minar in Delhi, which is ascribed to the 3rd or 4th century A.D.

India possesses some of the world's largest reserves of iron ore, mainly haematites and magnetites with iron content ranging between 60 and 70 per cent. The iron ore reserves in India, assessed at one-fourth of the total world reserves, are estimated at 2,100 crore tons. There are four different kinds of iron ore in India, i.e., magnetite, laterite, alloy iron stone and haematite. The most important of these, haematite deposits, are worked from the Singhbhum and the Orissa fields known as the Iron Belt of India. Magnetite ores occur in Madras, Mysore, Bihar, Orissa and Himachal Pradesh. Extensive spathic (carbonate) ores are present in West Bengal. The proved and indicated reserves of all types of ores amount to about 710 crore tons. Iron ore deposits in Goa are estimated at 500 million tonnes and there are about 70 mines in operation.

India's proven resources of iron ore of high-grade content at 22,000 million tons are the second largest in the world. In addition, she has reserves of low-grade ores which are estimated at four times this quantity.

Currently per capita steel consumption in India, taking into account domestic output and imports, is 11 kilograms (approximately 25.8 lbs.). This is one of the lowest in the world. To-day there are six steel plants—two in the private sector and four in the public sector—altogether producing about 4 million tons of steel. The share of each sector is nearly equal. Currently India is importing more than one million tons of steel yearly.

ATTEMPTS OF IRON AND STEEL PRODUCTION—The first attempt of iron and steel manufacture by modern methods was made in 1880 in South Arcot. In 1874, Barakar Iron Works started work in the Jharia coal-fields, the works were acquired by the Bengal Iron and Steel Company in 1889. Afterwards came the Tata Iron and Steel Works in 1907 at Sakchi, Bihar. Then came Indian Iron & Steel Company in 1918 at Hirapur (Asansol, Bengal) and Mysore State Iron Works (now Mysore Iron & Steel Ltd.) at Bhadravati in 1923.

PRESENT SET-UP—Consequent on the re-organisation of the Ministries in June, 1964 the Department of Iron & Steel became a part of the Ministry of Steel & Mines. The Department deals with the Iron & Steel (Control) Order, 1956, import and export of iron and steel, Steel Works in the public and private sectors, steel re-rolling mills and the ferro-alloys industry. Besides, functioning as the administrative Department for the Hindustan Steel Limited, Bokaro Steel

Limited, and the Hindustan Steel Works Construction Limited, it has also been entrusted with the work relating to the establishment of new Steel Plants in the Public Sector.

The Department has one attached office, namely, that of the Iron & Steel Controller with the head office at Calcutta and three regional offices located at Bombay, Madras and Delhi. The Iron & Steel Controller is responsible for the administration of the Iron & Steel (Control) Order, 1956, issue of licences for the import/export of iron and steel and for the bulk purchase of steel. The Iron & Steel Controller also acts as Chairman of the Joint Plant Committee which has been constituted for the receipt and planned distribution of indents for supplies of steel from domestic production and the planning of rolling programmes on the main producers of steel in respect of controlled and decontrolled items of iron and steel. A monthly bulletin called "Iron & Steel Control Monthly Bulletin" is published by the Iron & Steel Controller. The Metal Scrap Trading Corporation was formed to develop the export possibilities of Ferrous Scrap after catering to the requirements of indigenous furnaces. The Board of Directors of this Corporation includes six representatives of Domestic Consumers of Scrap, six of Scrap Exporters, and six of the Minerals & Metals Trading Corporation.

A Steel Exporters Association has been registered to encourage and assist exports of steel. The Association will include two representatives of Government, one representative of the Joint Plant Committee, one representative of the Steel Re-rolling Mills Association, three representatives of the Main Producers, three representatives of exporting firms and two representatives of billet re-rollers.

A "planning cell" has been constituted in the Union Ministry of Steel and Mines to chalk out long-term plans for the development of steel and mining industries. It will work in co-operation with the Planning Commission, the Hindustan Steel, the Coal Development Corporation, the Mineral Development Corporation, the National Mineral Laboratory, the CSIR, the Fuel Research Laboratory and other specialised organisations. The cell will concern itself more with long-term planning rather than with the five-year plans or the annual plans. The cell will assess the range of price of coal in the coming decade or two so that the development in this industry is not inhibited either for want of necessary equipment or for want of capital. Among its other activities will be to improve the technological know-how so that Indian steel production can keep pace with the latest improvements in other countries.

An *Iron and Steel Advisory Council* was constituted in November, 1959, to advise Government on all matters of a general character relating to iron and steel and in particular, to problems pertaining to production, distribution, transport, research, import and export.

KIRIBURU IRON ORE PROJECT—Situating on the Bonai range of hills lying on the border of Orissa and Bihar, roughly south-east of Rourkela, the Kiriburu Iron Ore Project was conceived to develop vast reserves of iron ore deposits for earning foreign exchange. This project came into being after an agreement by the Government of India

with Japan Steel Mission in 1958 for the sale by India to Japanese steel mills of 2 million tons of iron ore per year commencing from 1964. This multipurpose project was completed at a cost of Rs. 11.22 crores, assisted financially by a Japanese Yen credit for the purchase of plant and machinery as well as by a loan from the U.S. President's Fund for Asian Economic Development Fund. The National Mineral Development Corp. of the Government of India is responsible for the development of Kiriburu mines. It has been started from Nov. 12, 1964.

TECHNICAL COMMITTEE'S REPORT

The Technical Committee set up by the Government of India sometime back under the chairmanship of Dr. B. R. Nijhawan, Director, National Metallurgical Laboratory, to advise on various steps for improving iron production, submitted its full report to the Ministry of Steel and Mines in February, 1965.

The report has discussed different parameters covering industrial production of pig iron under Indian conditions. It deals with indigenous raw materials for iron smelting vis-a-vis current technological practices and introduction of the latest techniques, such as the use of super-basic self-fluxing sinter, pelletizing, injection of oil and high blast temperatures. The report has highlighted the latest innovations in iron production, and the results obtained, in countries like the USSR and Japan.

Other members of the Technical Committee were Dr. V. G. Paranjape, Chief Metallurgist of the Tata Iron and Steel Co., and Mr. B. N. Prasad, Superintendent, Blast Furnaces and Sinter Plants, Hindustan Steel Ltd.

UNITS IN THE PRIVATE SECTOR—*The Indian Iron & Steel Co., Ltd.*, has its two plants at *Burnpur* and *Kulti*, approximately 140 miles from Calcutta. Great expansion was made in 1953. In 1955, another expansion was undertaken to step up production of saleable steel upto 800,000 tons.

Tata Iron & Steel Co. Ltd.—Tata plant is the oldest in India. It is situated at Jamshedpur, 156 miles from Calcutta. The plant produced its first iron in 1911 and its first steel in 1913. The two expansion programmes were undertaken for the most modernisation of plant—one in 1952 and the other in 1955. This has doubled its capacity of a million tons of ingot. The second expansion scheme was undertaken in collaboration with an American firm, Kaiser Engineering Corporation. The scheme was completed in 1959-60. Tatas have also undertaken some ancillary works, such as, a new ferro-manganese plant at Joda, a new refractory plant at Joda, a new refractory plant at Belpahar in collaboration with Didier International, a ferro-sulphate washing plant and a plant for the recovery of scrap iron from slag by Hickett process. The company has its ore mines in Bihar and Orissa (Mayurbhanj). These mines yield high-grade iron ore and with the proximity of coal and limestone supplies,

facilities of water and rail-road and comparative nearness to the Calcutta Port, put the whole establishment in convenient location.

IRON & STEEL PRODUCTION

('000 tonnes)

	1963-64 (1)	1962-63 (2)	1961-62 (3)	1960-61 (4)	Percentage rise of : (1) over (2)	(2) over (3)
Tata Steel						
Saleable Steel ..	1,506	1,413	1,318	1,263	6.6	7.2
Steel Ingot ..	1,892	1,799	1,643	1,622	5.2	9.5
Pig Iron ..	1,811	1,764	1,645	1,586	2.7	7.2
Indian Iron						
Saleable Steel ..	810	795	737	722	1.9	7.8
Steel Ingot ..	1,027	1,002	934	914	2.5	7.3
Pig Iron ..	1,237	1,292	1,187	1,161	—4.3	8.9

UNITS IN THE PUBLIC SECTOR

Public Sector Steel Plants— Three integrated iron and steel plants in the public sector, with tribal capacity of 10 lakhs tons each, have been set up at Rourkela, Bhilai and Durgapur. The management of all these along with the Coal Washeries at Dugda, Bhojudih and Patherdih, the setting up of the Alloy Steel Plant at Durgapur, as well as the expansion of three Steel Plants at Rourkela, Bhilai and Durgapur to 1.8, 2.5 and 1.6 million tonnes capacity respectively vests in the State-owned *Hindustan Steel Ltd.* (See Index).

A new construction company has been set up in the public sector, under the name *Hindustan Steel Works Construction Co., Ltd.* which built all the steel works including Bokaro to be set up hereafter.

Rourkela—is the first of the three Government steel projects to take shape. It is about 257 miles west of Calcutta on the main Calcutta-Bombay rail route in Orissa. Though originally conceived in 1953, the agreement for a million ton plant at Rourkela was finished with a combine of two German firms, Messrs Krupp and Demag in July 1955. The project report was submitted in November, 1955 and was accepted by Government of India in November, 1956. The capital cost of the Plant upto one million tonne stage will be Rs. 233 crores ; expenditure incurred upto March 31, 1964 was Rs. 224.2 crores. It is supplied with ore from Taldih and coal from Kargali and Jharia. Washeries have been established at Kargali for washing coal. The unique feature about this plant is that 75 p.c. of the steel is made by the new LD. process. This process consists in blowing oxygen at high pressure into molten iron in special vessels called 'convertors'. This LD. process results in the release of large quantities of nitrogen as by-products. The President of India inaugurated the first Blast Furnace on February 3, 1959 marking the start of iron production. The first Coke Oven Battery was commissioned in December 1958 and the second in March 1960. The first steel ingot in the Public Sector was produced on April 30, 1959, when

the first Open Hearth Furnace was commissioned. The second and third Blast Furnaces were commissioned in 1959 and February 1960 respectively. The first L.D. Convertors were commissioned in January 1960. The Blooming and Slabbing Mill went into production in January 1960 and the Plate Mill in September, 1960. The Strip Mill was commissioned in March 1961. A Pipe Plant was set up as an adjunct to the Steel Plant. The capital cost of the Plant was Rs. 3.8 crores. The Fertilizer Plant put up as an adjunct to the Steel Plant at a capital cost of Rs. 25 crores, was also commissioned in 1962. The capacity is 5.9 lakh tonnes of nitro-limestone per year.

Bhilai—An agreement was signed between the Government of India and the Russian Government for starting a second steel factory at Bhilai on 2nd February, 1955. The main units of the Bhilai works consist of—(1) *Iron-making*, (2) *Steel-making* and (3) *Rolling mills*.

Under a contract signed between Hindustan Steel Ltd. and the Russian Organisation in 1962, the capacity of Bhilai Plant is being expanded to 25 lakh tonnes of steel ingot per annum, which will be rolled into 19 lakh tons of finished and semi-finished steel. The capacity envisaged was 1 million tonnes of ingots or 7.7 lakh tonnes of finished steel products including rails and sleepers and 3 lakh tonnes of pig iron for sale. The production of pig iron at Bhilai was inaugurated on February 4, 1959, when the first Blast Furnace was commissioned. The production of coke had started a few days earlier. The production of steel at Bhilai was inaugurated on October 12, 1959 when the Open Hearth Furnace No. 1 was commissioned. The Blooming Mill was commissioned on November 7, 1959, the Billet Mill on December 24, 1959 and the Rail and Structural Mill on October 27, 1960. Open Hearth Furnace No. 6 was commissioned on February 22, 1961 marking the completion of the Plant.

Durgapur—is the third Steel Plant in the public sector. *The Indian Steel Works Construction Company Ltd. (ISCON)* signed a contract with the Government of India on 31st October, 1956 to build an integrated steel works at Durgapur in West Bengal, which is 110 miles from Calcutta. ISCON was formed as a consortium of 13 British engineering and electrical firms. The Durgapur Plant was completed in August, 1962.

The first Blast Furnace at Durgapur went into production in December, 1959. The production of steel was started in April 1960 with the commissioning of the first Open Hearth Furnace. The Blooming and the Billet Mills were commissioned in May and June 1960 followed by Wheel Tyres and Axles Plant. The capacity of the Steel Works is being expanded to 1.6 million tonnes of steel.

Mysore Iron and Steel Ltd.—was registered in 1961 and took over the management of the Mysore State Iron Works in April, 1962.

The Union Government has sanctioned the scheme for establishing a third electric pig iron furnace at the Mysore Iron and Steel Works. This scheme will cost about Rs. 2.5 crores. When the furnace is installed, pig iron production is expected to increase from 80,000 tons to 2 lakh tons annually. This expansion was necessitated by the increase in mild steel production.

The first set of installations at the Mysore Iron and Steel Works, Bhadravati, went into production on March 6, 1965. The Bhadravati Steel Works is being converted into a high-grade and alloy steel plant. The first set includes one of the two 20-tonne electro-furnaces, a 680-mm blooming mill and a 603-mm heavy plate mill. West Germany has given a loan of about Rs. 7.2 crores for the conversion project. The proposed steel plant will have a capacity initially of 1.5 million tonnes of steel, which will be later developed to 4 million tonnes. The alloy and steel plant at Bhadravati will have two more electric furnaces, with an annual capacity of 1.25 lakh tonnes, for producing pig iron. A contract has been signed with Messrs Demag, a West German firm.

An agreement between India and the Soviet Union for co-operation in the construction of an integrated iron and steel plant at Bokaro was signed on January 25, 1965. The plant will have a capacity of 1.5 to 2 million tonnes of steel per year with a provision for extension to 4 million tonnes. The agreement provides for a Rs. 100.5-crore Russian credit in Roubles to meet the plant's foreign exchange requirements, construction work and the supervision of the plant will be entirely in Indian hands. Russia will be responsible for the design of the plant. A fee not exceeding Rs. 6.6 crores will be paid to Soviet experts for engineering consultancy.

The British-American Steelworks for India Consortium (BASIC), consisting of 4 U.S. and 3 British firms, with which India signed an agreement in January 1965 for a study of the fifth steel plant in the public sector, has suggested *Visakhapatnam* in Andhra Pradesh as the site for the said plant. The Government of India has accepted the suggestion.

The proposed steel plant will have a capacity of 1.5 million tonnes of steel, further to be expanded to about 4 million tonnes.

BOLANI ORES LIMITED—To supply iron ore to Durgapur Steel Plant a new mine has been developed at Bolani in the Gua region of Orissa, where ore deposits are extensive and rich. For the development and operation of the mine, a company called Bolani Ores Limited has been set up, in which the Government of India hold 50.50 per cent and the Orissa Mineral Development Company 49.50 per cent of the shares. The first phase of development to produce 1 million tonnes of ores has been completed. The supply of ore to the Durgapur Steel Plant started in April, 1960. The monthly rate of supply of ore to Durgapur during 1965 works out to about 1.20 lakhs tonnes. Bolani Ores Ltd. have finalised a programme for expansion of the mines to meet the increased requirements of the Durgapur Steel Plant after expansion to 1.6 million tonnes.

Alloy Steels—Alloy steel in a very broad sense conotes steel to which one or more alloying elements have been deliberately added with the object of imparting superior, mechanical and physical properties.

India's first alloy and special steel plant in the public sector was commissioned in Durgapur on January 23, 1965.

Estimated to cost Rs. 80 crores the project is designed to meet 50

per cent of India's present annual requirements of 200,000 tonnes of alloy steel. The plant is expected to go into full production by 1967.

The project's construction work was done in collaboration with Japan, which also supplied the main plant and equipment. The technical know-how for the manufacture of the highly specialised steels and training facilities were made available by Canada.

A low alloy steel plant, with an initial capacity of 1½ lakh to 2 laks tons will be established in Salem.

The Government have approved the setting up of two stainless steel units—one at Madras and another at Vatwa in Gujarat.

The Government sanctioned 3 schemes for setting up pig iron plants with a total capacity of 1 lakh tonnes per year, each in Rajasthan, Maharashtra and Andhra Pradesh. A pig iron plant will be established in Hospet in Mysore. In 1963, Government sanctioned three schemes for setting up pig iron plants with a total capacity of 1.70 lakh tonnes per annum, each in Punjab, Madras and West Bengal.

STEEL CASTINGS—dates back to 1922. The World War II created conditions which cut off foreign sources of supplies and the Indian industry was called upon to meet almost the entire internal demand for such castings. After independence, the various Government schemes for the improvement of roads, expansion of railways, manufacture of wagons, locomotives, road rollers etc. increased the demand for steel castings considerably. A foundry for heavy castings was set up in the Second Plan period by Tata Engineering and Locomotive Co. Ltd. with a capacity of 12,000 tons per year, to meet *inter alia* its own internal demand for castings under the locomotive manufacturing programme. In the public sector, also, two foundries were set up, one by the Chittaranjan Locomotive Works and the other by the National Industrial Development Corporation with rated capacities of 6,000 tons and 15,000 tons per annum respectively. In the public sector, the Hindustan Machine Tools established a grey iron foundry in 1958 to meet its growing demand for iron castings, with a projected capacity of 6,000 tons per year at a cost of Rs. 60 lakhs. Since the foundry at Chittaranjan Locomotive Works could not be completed due to foreign exchange difficulties, the project has spilled over into the Third Plan. The foundry, on completion, will have a capacity of 10,000 tons of steel castings and 3,000 tons of grey iron castings per year. Construction of the foundry shops at the three Steel Works was completed in 1960-61. Their overall capacity has been developed to 75,000 tons of grey iron castings and 15,000 tons of steel castings. Arrangements have also been made to set up captive foundry forge shops under the Mining Machinery Project at Durgapur in collaboration with the Soviet Union and an integrated foundry forge shop at Hatia near Ranchi along with Heavy Machinery Plant in collaboration with Czechoslovakia. The Hatia project will be developed in three stages and will ultimately produce 45,000 tons of steel castings.

There are at present 25 units producing steel castings and their installed capacity is 58,840 tonnes.

COAL WASHERY—With a limited reserves of metallurgical coal in the country, steps have been taken (1) to wash all metallurgical coals so as to lower the ash contents and (2) to blend weak and semi-cooking coal with fully coaking coals of Jharia. Hence, Hindustan Steel Ltd. has installed four coal washeries at Durgapur, Dugda, Bhojudih and Patherdih. The total investment in the Coal Washerries being set up by Hindustan Steel is estimated at Rs. 28 crores. The expenditure up to the end of March, 1964 was Rs. 19.2 crores. These are in addition to the Coal Washerries at Jamadola, West Bokaro and Lodna in the private sector and the one put up by the National Coal Development Corporation at Kargali in the public sector.

The Durgapur Washery was commissioned in April 1960 and supplies washed coal to Durgapur Steel Plant only. Dugda Washery is located in the Hazaribagh district of Bihar and has been in operation since December, 1961. It is designed for an annual input capacity of 2.4 million tonnes of raw coal. Bhojudih Washery is situated in the Purulia district of West Bengal. It commenced operation in August 1962. Patherdih Washery is located in the Dhanbad district of Bihar. It has been designed with an annual capacity of 2.0 million tonnes of raw coal and was completed in September, 1964 (See *Index*).

PRODUCTION STATISTICS

(In tonnes)

1. Production of saleable Pig Iron

					1963	1964
TISCO	..	..	..	..	8,651	8,342
IISCO	..	..	..	..	217,212	213,519
Rourkela	..	..	..	..	112,906	73,253
Bhilai	..	..	..	..	395,336	371,787
Durgapur	..	..	..	..	420,639	416,243
Orissa Ind. Dev. Corpn.	..	..	..	..	19,904	34,147
Acme	..	..	..	..	9,375	8,058
TOTAL					1,184,023	1,125,349

2.(a) Production of Finished Steel

Producer					1963	1964
TISCO	..	..	..	..	1,034,967	1,068,395
IISCO	..	..	..	..	649,857	648,849
MISL	..	..	..	..	41,225	39,788
Bhilai	..	..	..	..	640,713	660,454
Rourkela	..	..	..	..	525,986	562,320
Durgapur	..	..	..	..	355,002	448,921
Secondary Producers and Registered Rerollers						
(including wire drawing units)					887,071	791,469
Unregistered Rerollers					122,699	121,310
TOTAL					4,257,520	4,341,506

2.(b) Production of Finished Steel

Category	1963	1964
Structurals	820,610	813,648
Heavy Rails	446,601	437,501
Light Rails	11,745	20,255
Black Sheets (Plain)	319,172	345,478
Galvanised Sheets (Plain)	29,620	28,920
Galvanised Sheets (Corr.)	121,925	118,617
Plates	351,621	334,354
Bars	1,176,820	1,160,757
Rods	359,690	333,764
Wires	60,030	97,610
Hoops	9,285	10,888
Strips	84,276	129,293
Steel Sleepers	73,589	108,553
Tinplates	100,879	106,404
Skelp	172,585	193,455
W.T.A.	59,853	55,371
Special Sections	59,219	46,638
TOTAL ..	4,257,520	4,341,506

GENERAL IMPORT, 1964

Category	Quantity (in tonnes)	Value ('000 Rs.)
Blooms, Billets & Slabs	45,173	26,547
Structurals	3,493	2,547
Bars & Rods	95,039	85,443
Sheets & Plates	355,078	266,789
Hoops & Strips	31,591	36,891
Tinplate	42,310	42,177
Terneplates	160	195
Wire & Wire Rods	54,846	56,402
Pig Iron	68,404	22,662
Rails	6,315	5,128
Castings & Forgings	14,601	40,426
Tools & Alloy Steel	49,250	103,814
Scrap	6,467	3,561
Wheels, Tyres & Axles	10,288	11,986
Ferro-Alloys	2,269	5,518
TOTAL ..	785,284	710,086

EXPORTS, 1964

Category	Quantity (in tonnes)	Value ('000 Rs.)
Finished Steel	36,061	16,206
Scrap	314,678	39,299
TOTAL ..	350,739	55,505

COAL

COAL-FIELDS IN INDIA—Coal mining in India was first started in Raniganj, Bengal in 1814. In 1950, after more than 100 years of its existence, coal production in India reached 4,93 lakh tonnes in 1963-64 (upto December, 1963) of which 3,90 lakh tonnes was produced in the private sector. Coal is a fuel and an industrial raw material. When carbonised, it produces coke which is essential for the iron and steel industries. It also produces a large number of by-products, such as tar and benzol.

The principal users of coal in India are the Railways, the thermal power stations and a large number of industries including iron and steel, cement, refractories and glass, textiles, paper and board, sugar and chemicals. It is also required for bunkering and export, brick kilns, domestic use and by the collieries themselves.

There are at present about 850 collieries in the country. Of these, only about 20 are in the public sector and the remaining 830 in the private sector. The public sector collieries, excepting the four Singareni group in Andhra Pradesh, are managed by the National Coal Development Corporation (NCDC) which when formed in 1956, took over the eleven existing collieries of the Railways. NCDC has been starting new mining projects, such as one at Singerauli in the Sidhi district of M.P. In India, coal occurs mainly in formation of Gondwana and Tertiary ages. The reserves of coal occurring in seams of one foot or more in thickness down to the depth of 2,000 ft. are estimated at 11,677 crore tons. Rich deposits (about 11 crore tons) of coal with high coking index have recently been discovered at Chano Rikba block of North Karanpura coalfield. New seams have also been discovered in Singerauli, Ramgarh and Raniganj coalfields. A new colliery at Bistrampur in Madhya Pradesh started production in March, 1965.

Some new coal seams, numbering 22, have been located in the Ramgarh coalfield in Bihar. The total reserves are estimated at 270 million tonnes. The seams are nearest to Bokaro in Bihar.

The bulk of the better quality of coal reserves in India is situated in what is called the Bengal-Bihar coal belt, although production of coal is being expanded in Madhya Pradesh, Orissa, Andhra Pradesh and Assam. Lignite or brown coal, is mined in Neyveli, Madras.

The Estimate Committee of the Parliament recommended in 1955 that all new collieries should be State-owned and that there should be a Coal Commission with a power to take over such private collieries as did not function economically and satisfactorily. So the Revised Industrial Policy Resolutions of the Government placed coal industry in Schedule A, which meant that the State was competent to start new units of production.

LIGNITE—The Integrated Neyveli Lignite Project envisages the mining of 3.56 million tonnes of lignite per annum, out of which 1.52 million tonnes are to be utilised by 250 MW of thermal power in a thermal power station with 5 units of 50 MW each ; 0.52 million

tonnes on the production of 1,54,000 tonnes of nitrogenous fertilizers in the form of urea; and 1.52 million tonnes on the production of 3,86,000 tonnes of carbonised lignite briquettes for use as domestic and industrial fuel. Full production at the targeted rate of 3.5 million tons per annum is expected to be achieved by early 1966, when all the lignite consuming units of the Integrated Project, namely, the thermal power station, the fertilizer plant and the briquetting and carbonisation plant, would be in operation. Under the scheme, for the control of underground water, 58 pumps are now working (See also *Neyveli Lignite Corpn.*)

Out of the five 50-MW units of the power station, four are already in operation. The Government sanctioned in October, 1959 the setting up of a Fertilizer Plant at Neyveli for the production of 1,52,000 tons of urea with nitrogen content of 70,000 tons per year. The present estimated cost of the Integrated Project is Rs. 94 crores.

COAL BOARD—was set up under the Coal Mines (Conservation and Safety) Act, 1952 for the purposes of promotion of safety in coal mines and conservation of coal resources. The main activities of the Board are : (1) Financial assistance to collieries; (2) Collieries/seams continue to be graded in accordance with the prescribed specification; (3) establishing a Central Coal Mining Research Station, Dhanbad. The expenditure of the Board is met out of a fund known as the Coal Mine (Safety and Conservation) Fund created from the receipt of excise duty levied on all despatches of coal and hard coke.

COAL COUNCIL OF INDIA—helps to co-ordinate the programmes of transport, coal and power, implement training of technical personnel and prospecting and drilling of areas from which coal will be raised in the Fourth Plan (See also *Index*).

COAL WASHERIES—The first composite type of coal-washing plant in the public sector was installed at Kargali in Hazaribagh district (Bihar) in 1958, costing about Rs. 2.46 crores with an annual capacity of 16 lakh tonnes of washed coal (See also *Index*).

The following washeries are also being formed under NCDC—(1) *Kathara* (3 m. tonnes) in collaboration with a Russian firm under 112.5 million rouble credit (2) *Gidi* (Karanpura, 2.84 m. tonnes) in collaboration with a Polish firm under Rs. 14.3 crore/credit (3) *Swang* (0.75 m. tonnes) in collaboration with the C. F. R. I. (4) *Chalkari* (Kargali Extension, 0.5 m. tonnes).

NATIONAL COAL DEVELOPMENT CORPORATION LTD.—Has been established by the Government of India and was assigned a target of achieving during last quarter of the 2nd Plan, production of 13.5 million tons of coal per year. This target rate of production was not only achieved, but was, in fact, slightly exceeded. For achieving this production, the Corporation opened up 9 new mines and expanded the output of 11 old collieries.

The Third Plan target of production of the NCDC is to achieve by 1965-66, an additional production of 17 million tons a year. The NCDC has established the Central Workshop at Barkakana near Ranchi in Bihar to meet the urgent need for the repairs and manufac-

ture of some coal-mining machinery. The Central Workshop is a self-contained unit consisting of a big machine shop, a steel fabrication shop, a modern foundry capable of doing all types of grey iron and non-ferrous castings and a fully equipped smithy with the modern heat treatment equipment. One of the chief programmes of the Central Workshop is the manufacture of spare parts.

Another Central Workshop under NCDC is being started at Korba in Madhya Pradesh with Russian collaboration.

These are the foreign collaborators who are helping NCDC : (1) Polish, (2) U.S., (3) U.K., (4) French and (5) Russian.

The NCDC's collieries produced 8.25 million tonnes of coal during 1964-65 against a target of 8.34 million tonnes (See also *Index*).

COAL TRAINING—Five Mining Training schools are at present functioning under the NCDC. These schools are located at Talchar, Kargali, Kurasia, Giridih and Bhurkunda collieries. The NCDC also runs nine evening lecture centres for *sardars* and *shot firers* and three evening lecture centres for assistant surveyors.

MINERAL OIL

ADMINISTRATIVE AND FUNCTIONAL SET-UP—The new organisation of the Ministry of Petroleum and Chemicals is as follows :—(1) *Dept. of Petroleum*—production, supply, distribution and prices of petroleum and petroleum products; exploration and exploitation of oil resources and setting up of oil refineries, lubricating oil plants in India and distribution organisation for the sale of petroleum and petroleum products. (2) *Dept. of Chemicals*—Fertilisers, petro-chemicals, synthetic rubber, drugs and other fine chemicals, plastics, dye-stuffs, caustic soda & soda ash, chlorine, sulphuric acid, soaps and detergents, insecticides, anti-biotics, power alcohol. (3) *Other subjects*—International Congress of Orientalists, revision of gazetteers; Muslim Wakfs Act; 1954; Delhi Muslim Wakfs; Act 1943; work in respect of wakf property under the administration of Evacuee Property Act, 1950. These two Department function as a single unit in the Ministry of Petroleum and Chemicals.

THE BEGINNING OF OIL EXPLORATION IN INDIA—In India, escaping natural gas has for centuries been worshipped as a thing of awe at Jwalamukhi in the Kangra Valley of Punjab. An army naturalist, exploring for coal in Assam as early as 1828, came upon streaks of oil—but he ignored them. Some years afterwards, when the railways were being laid in Assam, a lumber elephant returned from the woods with a foot soaked in oil.

In 1866, seven years after oil was discovered in America, the first well for oil was sunk in India. The first successful well was sunk at Digboi in 1889, where oil was struck at 662 ft. In the next 60 years, whatever oil was produced in India was at Digboi. Over the period, Digboi production went up to 500,000 tons.

The Digboi crude oil was refined at a refinery set up there in 1900. The oil-field and the refinery belonged to the Assam Oil Company which was later bought over by Burmah Oil Company which was a part of the world-wide Burmah-Shell oil enterprise.

Between 1889 and 1947 more explorations for oil were conducted in various parts of the country—Punjab, Baroda, Cochin and Kutch.

After independence, the Govt. of India has been able to make much headway in the exploration of oil resources. Following is the list of achievements : (1) More than 87 million tonnes of deposits have been proved in Gujarat. (2) Production of crude oil, which was only five lakh tonnes in 1947, is today many times more. (3) In 1947, there was only one oil refinery, handling five lakh tonnes. Today seven refineries are working, four in the private sector and three in the public. (4) The Institutions have been set up in the public sector to deal with aspects of the oil industry—Oil and Natural Gas Commission, India Refineries Ltd., and Indian Oil Company. The State has also a fifty-fifty share in Oil India Ltd., which produces a half of the annual output.

Our consumption of petroleum products is going up fairly fast. By 1971, the crude oil which we shall need may be of the order of about 27 to 28 million tonnes to give us finished products of about 24 to 25 million tonnes.

EXPLORATION—Of the 12.62 lakh square miles that make up the total area of India, nearly a third, i.e., some 400,000 square miles are sedimentary areas where oil is likely to occur.

A Petroleum Division was set up in the Geological Survey in 1955 in order to conduct the search for oil in a systematic manner. This grew into a Directorate of Oil and Natural Gas in the Ministry of Natural Resources in 1955. The Directorate became the Oil and Natural Gas Commission (ONGC) in August 1956 and three years later it was converted into a statutory organisation. Its main functions, as defined in the Act of Parliament, are to "plan, promote, organise and implement programmes for the development of petroleum resources and the production and sale of crude produced."

One of the first tasks of the oil organisation was to build up corps of scientists and technicians. The organisation acquired a deep-drilling rig from Rumania and entered into agreements with the Soviet Union for the supply of more equipment. Under the Colombo Plan, Canada undertook an aeromagnetic survey of the Indo-Gangetic plain. ONGC has also signed agreements with the Italian State-owned oil company, ENI, and the French Petroleum Institute for assistance in explorations (See also *Index*).

By the end of January, 1964, the Commission had completed the drilling of 193 wells (with a footage of more than one million). Of these, 91 wells had shown the presence of oil, 26 the presence of gas, 22 had proved dry and the other 54 were under tests. The completed wells included 178 in Gujarat, 9 in Assam, 5 in Punjab and 1 in U. P.

ONGC has three training institutes at Bereilly, Cambay and Sibargar, each admitting 100 people to be trained as rigmen, machinists and mechanics. Besides, it has a research laboratory at its head-

quarters in Dehra Dun which is also the home of the Indian Institute of Petroleum.

The total expenditure of ONGC during the Second Plan period was Rs. 24 crores and in the first three years of the Third Plan, about Rs. 53 crores.

However, ONGC is not the only agency carrying on oil explorations in India. The **Burmah Oil Company** found large reserves in Naharkatiya, Moran and Huriyan in Upper Assam in 1953. To develop these resources, the **Burmah Oil Company** and the Government of India went into partnership to form **Oil India Ltd.** in 1958.

Earlier in 1953, an agreement was made with the **Stanvac** to explore West Bengal basin. **Stanvac** called off the search after 6 years.

PRODUCTION—The work of ONGC is not only to explore but also to work oil resources. Normally, it takes three to four years between the time when oil is found and the time when it can be despatched. Regular production and despatches of oil for the Bombay refineries started in August 1961 with about 600 tons a day, which has now been stepped up to about 2,200 tons a day.

ONGC has built a pipeline from Ankleshwar to Koyali (near Baroda) where a State refinery is coming up. Pipelines are also being laid from Ankleshwar to Uttaran and from Cambay to Dhuvaran. These will carry natural gas.

Meanwhile, **Oil India Ltd.** has also made substantial progress. Apart from providing half the total production of the country, **Oil India** has laid a long pipeline connecting the oil-fields of Assam with the refineries at Nummati and Barauni. 720 miles in length, the pipeline is the second longest in Asia and one of the most modern in the world. Its final cost was about Rs. 45 crores.

Oil India Ltd., which has its headquarters in Duliajan (Assam), has an authorised capital of Rs. 50 crores. It was incorporated on February 18, 1959, with the Government of India holding 33½ p.c. of the paid-up shares in the Company. The Company held mining leases over an area of 510 sq. miles. The main objectives are : (1) exploration for and production of crude oil (including natural gas) and (2) construction of a pipeline to transport crude oil to the Government-owned refineries at Nummati and Barauni, with initial capacities of a 75 and 2.0 million tons per annum respectively. Consequent on the signing of such supplementary agreement on July 27, 1961, the Government of India and B.O.C. became equal share-holders in **Oil India**. **Oil India** has completed 150 oil-wells in Assam. Of these, 106 yield oil and 8 yield gas ; 16 are dry and 20 yet under tests. In 1964, it declared a dividend of 9 per cent after taxes. The net surplus was Rs. 336 lakhs (See also *Index*).

REFINING—The oil that is found in the bowels of the earth is not fed directly into a jet aeroplane or a kitchen stove. Such oil, called 'crude', is refined or distilled to separate the numerous compounds of which it consists, such as *fuel gas* (can be used as fuel for lighting, heat and power), *Propane*, *Butane*, *Light naphtha* (used by automobiles), *heavy naphtha*, *kerosene*, *stove oil*, *light gas oil* (furnace oil,

as also diesel), *heavy gas oil*, *vacuum oil*, *pitch* (from which come the asphalts), etc.

The present refinery capacity in the country is about 8 million tonnes in the private sector and about 7 to 7.5 million tonnes in the public sector.

In pre-independence days, India had only a small half-a-million ton refinery at Digboi in Assam. In 1951, two agreements were concluded with Standard Vacuum Oil Company and Burmah-Shell to set up refineries in Bombay. Later, a similar agreement was concluded with Caltex to install a somewhat smaller refinery at Visakhapatnam.

In February 1959, a State Company, the *Indian Refineries Ltd.* (which later merged with Indian Oil Corporation Ltd.) was formed to build and manage the refining business in the public sector. Agreements were concluded with Rumania in Oct. 1959, to set up a refinery at Nunmati in Gauhati, Assam and with the Soviet Union in June 1960, to build a refinery at Barauni in North Bihar.

Indian Oil Corporation Ltd. (Refineries Division) and the Soviet export organisation executed a contract on Jan. 11, 1965, providing for the delivery of 1,540 tonnes of equipment and materials for the expansion of the Barauni Refinery. The total cost of the expansion is estimated at Rs. 276 lakhs of which the cost of supplies and technical assistance from the USSR will be Rs. 73.29 lakhs.

The ONGC signed an agreement with Tiajpromexport, the Soviet export organisation executed a contract on Jan. 1965, providing for expanding the capacity of the Koyali Refinery in Gujarat to 3, millions tonnes of crude oil. The total cost of expansion will be Rs. 2.91 crores. The Soviet Union has given a credit of Rs. 59.53 crores for setting up the refinery and other industrial project. From April 1, 1965, the control and management of Koyali Refinery Project have been taken over by India Oil Corporation Ltd. (Refineries Division) from ONGC.

An agreement was also reached with Phillips Petroleum Company of U.S.A. to set up a refinery at Cochin with a capacity of 2.25 million tonnes.

A 2.5-million tonne oil refinery will be set up in the public sector in Madras under an agreement between the Government of India, National Iranian Oil Company and the American International Oil Company signed on November 18, 1965. According to present target the Rs. 24-crore refinery will be commissioned during the first half of 1968.

Another oil refinery will be located at Haldia in West Bengal. *Refineries in the private sector:*

Digboi— In Assam. Started production in 1900. Managed by Assam Oil Company. Capacity: 0.5 million tonnes.

Esso— At Trombay near Bombay. Started production in July 1954, with a capacity of 1.2 million tonnes. Present capacity: 2.50 million tonnes.

Burmah-Shell—At Trombay near Bombay. Started production in December 1955, with a capacity of 2 million tonnes. Present capacity: 3.75 million tonnes.

Caltex—At Visakhapatnam in Andhra Pradesh. Started production in April 1957, with a capacity of 0.675 million tonnes. Present capacity : 1.05 million tonnes.

Refineries in the public sector :

Nunmati—At Gauhati in Assam. Set up with Rumanian collaboration. Started production in January 1962. Capacity : 1st stage—0.75 million tonnes ; 2nd stage—1 million tonnes.

Barauni—In Bihar. Set up with the Soviet Union's collaboration. Started production in July 1964. Capacity : 1st stage—1 million tonnes ; 2nd stage—2 million tonnes ; 3rd stage—3 million tonnes.

Koyali—Near Baroda in Gujarat. Being set up with the Soviet Union's assistance at a cost of Rs. 30.21 crores. Its first unit, having an annual capacity to produce one million tonnes of petroleum products, was commissioned on October 1, 1965. The refinery will draw crude oil from the oilfields of Ankleshwar and Kalol. Capacity : 1st stage—1 million tonnes ; 2nd stage—2 million tonnes ; 3rd stage—3 million tonnes.

STATISTICS OF INDIAN REFINERY CONSTRUCTION

	Date of		Time between agreement and start-up in months	Capacity : M.M. tonnes a year	Investment Rs. crores	Investment Rs. tonnes
	Agreement	Start-up				
Digboi	—	1920	—	0.5	—	—
I. Esso						
Original	12/51	7/54	31	1.25	12.4	100
Present				2.50	16.9	68
Burmah-Shell						
Original	12/51	2/55	38	2.10	25.0	120
Present				3.75	28.3	75
Caltex						
Original	3/53	4/57	49	0.68	14.2	210
Present				1.05	14.7	140
II. Nunmati	10/58	1/62	39	0.75	17.7	240
Barauni	8/59	7/64	59	2.00	42.0	210
Koyali	7/61	1/66	54	2.00	30.0	150
III. Cochin	4/63	1/66	33	2.50	17.0	68
Madras	10/64(1)			2.50	17 (Est)	68
Current estimates	—	—	30	2.50	10.6	42

LUBE REFINERY

The Government of India signed an agreement with the Esso for the construction of a jointly-owned lubricating oil base stock refinery at Bombay on September 15, 1965. The plant will have a capacity of 1.45 lakh tonnes per year yielding about 55 per cent of high-

(1) Date collaborator chosen, agreement still under negotiation.

grade, automotive base oil and 45 per cent medium-grade industrial type base oil. It is the second venture of its type in which the Government and a private oil company will participate as equal partners. The new lube refinery, estimated to cost Rs. 7.2 crores including Rs. 4.3 crores in foreign exchange, will be located near the Esso's refinery in Bombay. Its products will be shared on a 50-50 basis. The Esso lube blending plants in Bombay and Calcutta will utilise half of the production. The 50 per cent Government share will be delivered to the Indian Oil Corporation.

DISTRIBUTION—Until 1959, marketing of oil in India was wholly in private hands. The State entered this important business in June that year by setting up *Indian Oil Company*, which has now merged with *Indian Oil Corporation Ltd.*, with headquarters in Bombay. Indian Oil Co. had an authorised capital of Rs. 12 crores.

Indian Oil Corporation Ltd.—The Indian Oil Company, a marketing organisation and the Indian Refineries Ltd., a refining firm, both in the public sector, have merged to form Indian Oil Corporation Ltd. with a share capital of Rs. 75 crores (See also *Index*).

The new Corporation has two divisions—refining and marketing, with headquarters in New Delhi and Bombay respectively.

In distribution, the Corporation has made remarkable progress. Its total sale in 1962-63 was less than 6.5 lakh kilolitres, in 1963-64 it was about 11.70 lakh kilolitres and in 1964-65, 17.20 lakh kilolitres.

PETRO-CHEMICAL INDUSTRIES—With the production of natural gas in Gujarat and Assam and of refinery gases in the various refineries, a petro-chemical industry is also taking root in the country. In the public sector, the *Fertilizer Corporation of India*, a Government of India undertaking, has launched a programme of setting up a chain of chemical fertilizer factories all over the country (See also *Index*). In the private sector, there will be a carbon black plant in Maharashtra and Assam each and four fertilizer factories at Visakhapatnam, Hanuman Ghat, Mangalore and Tuticorin based on other refinery gases or naphtha. A fertilizer factory at Badia based on petroleum feedstocks is to come up in the mixed sector (See *Fertilizers Section*).

PIPELINE PROJECT—Pipelines have become the *sine qua non* of the oil industry. India's first trunk pipeline for transport of crude oil from Naharkatiya to the State-owned refineries at Gauhati and Barauni is complete; the Naharkatiya-Gauhati sector is already supplying crude oil to the Gauhati refinery and the Gauhati-Barauni sector is also working. The total length of the pipeline is almost 720 miles. These pipelines are being constructed by the Oil India Ltd. This pipeline is the second longest in Asia. The first section of the pipeline, from Naharkatiya to Gauhati, was completed in March 1962 and the second part in June 1963. A notable fact about this project is that the final cost, about Rs. 45 crores, was below the original estimate of between Rs. 46 crores and Rs. 47 crores. The foreign exchange for the project was met by loans from the British Government and the Bank of Scotland.

A contract for the construction of five pipelines in Gujarat area was signed on May 6, 1963 between Oil and Natural Gas Commission and SNAM, a subsidiary of the ENI, Italy. About 350-kilometre long pipelines will transport natural gas, crude oil and petroleum products in the State.

India's first long-distance pipeline linking the Gauhati refinery with Siliguri (West Bengal) has been formally commissioned. The pipeline, 415 kilometres in length, will carry 4.81 lakh tonnes of oil products every year, relieving the railways of a big burden. The pipeline cost Rs. 6.8 crores. Its designing, engineering and construction management were entrusted to the Bechtel Corporation of U.S.A. The construction was done by the SNAM, a subsidiary of the ENI of Italy, under the agreement of 1961. The pipeline will increase and enable the better use of the refinery's storage capacity.

The two longer pipelines totalling 1,210 kilometres, which connect the Barauni Refinery with Calcutta and Kanpur are nearing completion at a cost of Rs. 26 crores.

In the eastern sector, 2,782 kilometres of pipelines are expected to be in operation by the end of the Third Plan. Pipelines totalling 3,151 kilometres are to be laid in the country during the Third Plan period and the Fourth Plan is expected to add 2,500 kilometres to the total.

RESEARCH AND TRAINING IN PETROLEUM—An Institute of Petroleum has been established with the assistance from the French Petroleum Institute under the control of the Council of Scientific and Industrial Research. Steps to establish a Training and Research Wing in the Oil & Natural Gas Commission with the assistance of UNSF have also been taken.

IMPORTANT OIL DATES

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| 1955 : | <i>Oil and National Gas Directorate</i> formed. | |

- 1958 : *Oil India Ltd.* set up by agreement between Government and Burmah Oil Company.
Gas struck at Jwalamukhi, Punjab.
Oil struck at Cambay by ONGC.
Agreement with Rumania to build a refinery at Nunmati.
- 1959 : Indian Refineries Ltd. set up Indian Oil Company for the marketing and distribution of petroleum products.
Agreement with Soviet Union to set up a refinery at Barauni. ONGC became a statutory commission (Oct.)
- 1960 : ONGC struck oil at Ankleshwar (Gujarat), May 13.
Agreement with Soviet Union on petroleum products.
Trial production began in Ankleshwar.
Agreement with French Petroleum Institute.
- 1962 : First public sector refinery at Nunmati inaugurated.
- 1963 : Decision to expand public sector refinery capacity.
Agreement with Phillips Petroleum, U.S.A., to set up a refinery at Cochin (Kerala).
Barauni refinery started working in July.

FERTILIZERS

The production of fertilizers in India has assumed an important position. The most of them are nitrogenous fertilizers. The installed capacity of all these fertilizer projects, public and private, is 386,550 tonnes

Production of fertilizers in India was 2.24 lakh tonnes in 1963-64.

Following are the fertilizers factories in India :

Sindri Factory, Nangal Factory, Rourkela Factory, FACT (Alwaye), Belagula Factory, Trombay, Ennore Factory, Varanasi Factory. Last two are in private sector and others are in public sector.

The production of nitrogenous fertilizers in the country during 1964 was 224,579 tonnes as against a production of 219,275 tonnes in 1963.

Production of sulphuric acid had almost doubled during the last 5 years—from 353,943 tonnes in 1960 to 680,000 tonnes in 1964.

Fertilizer Corporation of India—(See *Index*).

International Bank for Reconstruction and Development had agreed in principle to give a loan of \$18 million for the Kothagudem Fertilizer Project. It will go into production during the first quarter of 1967.

The foundation of the Durgapur Fertilizer Factory, the biggest fertilizer production unit so far planned in India, was laid on Jan. 8, 1965. The factory which is expected to come up on a 1,000-

acre site in Durgapur during the next three years will have a capacity to produce about 250,000 tons of chemical fertilizers per annum—to say in terms of plant nutrients, 125,000 tons of nitrogen, 108,500 tons of phosphate and 15,000 tons of potash. The total investment on the project is nearly Rs. 37 crores.

A giant fertilizer plant will be set up in Goa by the Birla group in collaboration with a well-known American firm. The plant which will be naphtha based and which is expected to be completed in the last quarter of 1968, will produce 3.4 lakh metric tonnes of urea per annum. Besides making a substantial contribution for increasing food production in the country the plant will also save Rs. 20 crores of foreign exchange annually. The plant is proposed to be expanded later.

The Rs. 39.50-crore Trombay Fertilizer Factory in Bombay went into production on October 15, 1965.

The Trombay project—FCI's third factory apart from Sindri and Nangal—is one of the "most interesting" and the largest in India. For the first time the complex nitrophosphate fertilizer would be produced indigenously. It was designed to produce 90,000 tonnes of nitrogen and 45,000 tonnes of phosphate in the form of 99,000 tonnes of urea and 330,000 tonnes of nitro-phosphate respectively.

Planning and Development Division—There is a central technical organisation with 269 scientists, technologists and engineers in its roll for playing an increasingly important part in the future development of the Fertilizer Corporation. It was started at Sindri in 1951.

It has various functional departments which are interdependent: Practical Technology Department, Project Planning and Process Design Department, Project Planning and Technological Design Department, Engineering Department (The Mechanical Engineering Wing and the Civil, Structural and Public Health Engineering Sections), Electrical and Instrumentation Engineering Department and Techno-Commercial Procurement Department.

The Division has been organised to handle two projects a year and it is taking advance action on Korba and Durgapur projects.

In 1955, a *Central Institute of Fertilizer Technology* came up in Sindri utilising Russian assistance under U.N. auspices.

Fertilizers and Chemicals Travancore Ltd. (Alwaye)—This company, in 1960, became a Govt. undertaking under State sector with the Govt. of Kerala holding majority shares. The Govt. of India have invested Rs. 3.50 crores in this company, thereby acquiring majority control from July, 1963.

LABOUR

ORGANISATIONAL SET-UP—Labour being a concurrent subject, both the Union and the State Governments are competent to enact and administer labour laws. The Central Government generally lays down policy for the whole country, while its implemen-

tation is mostly the responsibility of the State Governments. However, labour employed in railways, major ports, mines, oil-fields, banking and insurance companies comes directly within the purview of the Central Government. The activities in the field of employment and training are also conducted by the Central Government.

Under the Indian Constitution, the following subjects may be legislated concurrently by the Central and State Legislatures—(1) Trade Unions, industrial and labour disputes, (2) Social Security and Social Insurance, employment and unemployment, (3) Welfare of labour, including conditions of work, provident funds, employers' liability, workmen's compensation, invalidity and old-age pensions, maternity benefits, (4) Vocational and Technical Training of labour, (5) Relief and Rehabilitation of refugees.

LABOUR AND THE CONSTITUTION—Article 23 of the Constitution prohibits *begar* and other forms of forced labour and Article 24 lays down that no child below the age of fourteen years shall be employed to work in any factory or mine or engaged in any other hazardous employment. Articles 39, 42 and 43 of the Part IV of the Constitution lays down certain "Directive Principles of the State Policy" regarding labour, such as : citizens have the right to an adequate means of livelihood ; the operation of the economic system should not result in the concentration of wealth and means of production to the common detriment ; there should be equal pay for equal work for both men and women ; provision for just and humane conditions of work and maternity relief ; living wages, etc. for workers, etc., etc.

ADMINISTRATION (AT THE CENTRE)—The activities of the Government of India regarding labour is controlled by the *Ministry of Labour and Employment*. The Ministry deals with the following subjects—(i) Labour Welfare, (ii) Industrial and Labour Disputes, (iii) Labour, (iv) Unemployment Insurance and Health Insurance, etc., (v) Labour employed in railways, major ports, mines and oil-fields, (vi) Resettlement of demobilised soldiers and discharged war workers, (vii) Participation in the International Labour Conference and work connected therewith.

As regards subjects (i) to (iv), the Ministry is only responsible for laying down the general policy for the whole of India, while the implementation of the policy relating to these subjects is entirely the responsibility of the State Governments concerned, though the Central Government has powers to exercise control and give directions.

The followings are the attached offices of the Ministry :—

(1) *Office of the Director-General, Employees' State Insurance Corporation, New Delhi*—is a quasi-Government institution to administer the Employee' State Insurance Act. It has a network of regional offices throughout the country.

(2) *Office of the Director, Labour Bureau, Simla*—is responsible for the collection and compilation of labour statistics, maintenance of working class consumer index number, keeping up-to-date factual data relating to working conditions, conducting research into specific problems, etc.

(3) *Office of the Director General of Resettlement and Employ-*

ment—This office was set up in 1945 to assist the demobilised personnel in their resettlement in civil life from the army. After some time, the scope and activities of this office were extended to various other categories.

(4) *Office of the Chief Labour Commissioner, New Delhi*—This office deals with (1) conciliation, (2) examination of welfare measures and advice to the employees and the Government in connection therewith, (3) operation of labour laws to the extent of general responsibilities, (4) organisation and setting up of canteens in all Government undertakings, besides offering advice to the State Governments and Administrations. There are six regional offices under the control of the Chief Labour Commissioner.

(5) *Office of the Coal Mines Welfare Commissioner, Dhanbad*—The Commissioner deals with (i) the administration of Coal Mines Labour Welfare Fund Act, 1947 and (ii) the administration of the Mica Mines Labour Fund Act, 1946.

(6) *Office of the Chief Inspector of Mines, Dhanbad*—The activities of this office are : (i) enforcement of the *Mines Act* of 1952, (ii) inspection of mines, (iii) investigation of accidents, (iv) inspection of electrical installations and machinery (v) technical advice to mine-owners, (vi) prosecutions, (vii) collection of statistics and (viii) enforcement of the *Maternity Benefit Act*, 1961.

(7) *Office of the Chief Adviser of Factories, New Delhi*—This office deals with (a) training of Factory Inspectors and Safety Officers, (b) industrial health, survey of toxic hazards, (c) environmental problems in factories, (d) studies relating to productivity and work methods, (e) housing of industrial labour and administration of safety measures, (f) Health and Welfare Schemes under the *Dock Workers (Regulation of Employment) Act*, (g) assistance in all matters relating to the construction, design and lay-out of factories, (h) matters relating to the working conditions, (i) collection of up-to-date information in respect of safety, health and welfare of industrial workers.

(8) *Office of the Controller of Emigrant Labour, Shillong*—This office deals with (a) interpretation of the *Tea Districts, Emigrant Labour Act*, 1932 and the Rules, (b) recruitment, registration of labour and inspection of tea gardens and depots, (c) compensation cases relating to persons belonging to provincial Civil Labour units and State Labour units who worked on Defence projects.

(9) *Office of Welfare Commissioners, Mica Mines Labour Welfare Fund, Dhanbad and Nellore.*

(10) *Office of the Coal Mines Provident Fund Commissioner, Dhanbad*—This office was set up in 1948 for (a) administration of Coal Mines Bonus Scheme and (b) administration of Coal Mines Provident Fund Scheme which was formed under Coal Mines Provident Fund and Bonus Schemes Act, 1948.

(11) *Office of the Central Provident Fund Commissioner, New Delhi*—is responsible for the collection of amounts due to the Fund from employers and the payment of claims due to workers.

(12) *Institution of Work Study, New Delhi*—was inaugurated on 31st August, 1963, to promote full use of work study to bring about increased efficiency in national development.

TRADE UNIONISM IN INDIA

Trade Union Act of 1926 conferred a legal and corporate status on registered trade unions and granted them certain immunities in regard to trade disputes. The Act makes provisions for three matters—(1) conditions governing the registration of trade unions, (2) the obligations to which a trade union is subjected after registration and (3) the rights and privileges accorded to registered unions. The Act also allows the funds of the registered unions to be spent for the conduct of trade disputes and for the provision of benefits to its members.

The amended Act of 1947 contains a provision for compulsory recognition of representative unions by employers. The redeeming feature of the Act is that Labour Courts are to be appointed to hear and decide disputes arising from the refusal of employers to recognise any particular union. The Act specifies certain acts as unfair practices on the part of recognised unions and certain other acts as unfair on the part of employees. It also declares as unfair practice for an executive of a union to instigate a strike and unfair for a majority of members to take part in an irregular strike.

There are at present four central all-India trade union organisations in India: the *Indian National Trade Union Congress*, the *All-India Trade Union Congress*, the *Hind Mazdoor Sabha* and the *United Trade Union Congress*. They differ in regard to certain fundamental principles based on political attitudes. I.N.T.U.C. which was founded in May, 1947, was recognised by the Government as the most representative organisation of workers. I.N.T.U.C. maintains close union with the Congress. In 1948, socialists separated from the All-India Trade Union Congress and formed *Hind Mazdoor Sabha*. The United Trade Union Congress, started in 1949, tries to keep aloof from the party politics. It is almost free from leftist leadership and also does not try to support Government in all its aspects.

Though the four national organisations dominate the Indian trade union movement, not all trade unions in India belong to them or follow their leadership. A very large number of small unions stand aloof from their leadership. The striking examples of these are *Ahmedabad Textile Labour Association* and *National Federation of Indian Railwaymen*.

MEMBERSHIP OF ALL-INDIA ORGANISATIONS

	No. of affiliated Unions			Membership		
	1958	1959	1960	1958	1959	1960
I.N.T.U.C. ..	727	886	860	9,10,221	10,23,371	10,53,386
Hind Mazdoor Sabha ..	151	185	190	1,92,948	2,41,636	2,86,202
A.I.T.U.C. ..	807	814	886	5,37,567	5,07,654	5,08,662
United Trade Union Congress	182	172	229	82,001	90,629	1,10,034
Total ..	1,867	2,057	2,165	17,22,737	18,63,290	19,58,584

LABOUR WELFARE

Factories Act, 1948, Mines Act, 1952 and Plantations Labour Act, 1951 have made provisions for amenities, such as canteens, creches, rest shelters, washing facilities, medical aid and for the appointment of welfare officers in respect of industries and establishments. In addition, legislative measures for the creation of welfare funds in coal and mica mines have been enacted.

Standing Mines Safety Equipment Advisory Board was set up in June, 1963 and is composed *inter alia* of representatives of mine owners, mine managers, mine workers and the Government Departments concerned. The functions of the Board are (a) to make annual assessments of future requirements of mine safety equipment and material; (b) to review the position regarding import of such equipment and material; (c) to keep track of the progress of indigenous production of such equipment and material and (d) generally to advise on the availability of mine safety equipment.

The National Council for Safety in Mines was set up on July 11, 1963 to promote safety education and propaganda in mines. It includes representatives of mine owners, workers and mine managers.

Coal Mines Labour Welfare Fund was established in 1944 for improving the living and social conditions of workers in the coal mining industry.

The estimated income and expenditure of the Fund during 1964-65 are Rs. 354.00 and Rs. 400.16 lakhs respectively. It maintains two Central Hospitals (one each at Dhanbad and Asansol) and eight Regional Hospitals (two each at Jharia and Hazaribagh Coalfields and one each at Ranigunj, Pench Valley, Vindhya Pradesh and Korea Coalfields). Its two Allopathic Dispensaries at Bhuli and Mugma treated 22,336 patients during 1964-65. It also maintains 15 Ayurvedic Dispensaries in various coalfields. A Family Welfare Centre is attached to each of the Regional Hospitals. Besides, 8 such centres are functioning as independent units. Similarly, 53 Maternity and Child Welfare Centres are being run by the Jharia and Asansol Mines Boards of Health and Hazaribagh Mines Board. Two 100-bed T.B. Wings are functioning as adjuncts to the Central Hospitals at Dhanbad and Asansol. 433 Co-operative Societies/Stores are functioning in the different coalfields.

The Dock Workers (Regulation of Employment) Schemes framed under the Dock Workers (Regulation of Employment) Act, 1948 are at present in operation in the 5 major ports of Bombay, Calcutta, Madras, Cochin and Visakhapatnam. The schemes seek to regulate the employment of certain specified categories of stevedore labour. These schemes are administered by Dock Labour Boards which are tripartite bodies consisting of an equal number of representatives of (i) Central Government; (ii) Dock Workers and (iii) the employers of Dock Workers and shipping companies. The Act has been extended to the Mormugao port.

Mica Mines Labour Welfare Fund provides medical, educational and recreational facilities for mica mine workers. The estimated income and expenditure of the Fund during 1964-65 are Rs. 27 lakhs

and Rs. 42 lakhs respectively. The Fund maintains a 100-bed hospital at Karma (Bihar) and a 14-bed hospital at Kalichedu (Andhra Pradesh). Another hospital at Tisri (Bihar) has a bed strength of 30. A 30-bed hospital at Gangapur (Rajasthan) has started functioning. A 50-bed T. B. Hospital at Karma is functioning. The Fund also maintains 20 Ayurvedic Dispensaries, 13 Static Dispensaries, 9 Mobile Medical Units and 18 Maternity and Child Welfare Centres. Besides, the Fund extends educational and recreational facilities. There are 8 each of Multipurpose Institutes and Community Centres, 10 Women's Centres, 14 Primary Schools, 8 Feeder Centres, 5 High Schools, 25 Adult Education Schools, 6 Boarding Houses for Miners' Children, 3 Mobile Cinema units and 61 Radio sets.

Under *Plantations Labour Act, 1951*, all plantations are required to provide housing accommodation for the workers and their families in their residential quarters and to maintain hospitals or dispensaries. Most States and Union Territories are running a number of welfare centres.

Motor Transport Workers' Act, 1961 provides for the welfare of motor transport workers and to regulate the conditions of their work.

Iron Ore Mines Labour Welfare Cess Act, 1961 provides for the levy and collection of cess for promoting the welfare of labour employed in this mining industry. It came into force from October 1, 1963. The estimated income and expenditure of the Fund during 1964-65 are Rs. 47 lakhs and Rs. 7.58 lakhs respectively.

Safety measures in mines are undertaken under the Mines Act, 1962 and the rules and regulations and bye-laws made thereunder. This Act provides for the regulation of labour and safety in mines. During 1964, 294 persons were killed and 3,190 persons were seriously injured in accidents in all mines.

So far 2,016 consumers' co-operative stores/fair prices shops have been set up in about 3,373 industrial establishments in the country employing 300 or more workers.

Child Workers in India—There are about 15 million child workers in the country, according to a report on the working population released by the Registrar-General of India.

The report, which for the first time gives age-wise distribution of the working population, shows that of the 188.67 million workers counted at the 1961 census, 7.5 per cent were below 15 years of age.

It is observed that child labour is more common in rural areas—particularly in agriculture and household industry—than in urban areas. The total number of children employed as cultivators or agricultural labourers was 10.58 million.

In urban areas, children are mostly employed in domestic and personal services.

The report reveals that majority of the working population is between 15 and 34. Of the total working force of 188.67 million, about 93 million were in this age-group. Thus, including child workers, about 58 per cent of India's working population is below 34.

This is in sharp contrast to the situation in more developed countries where, due to a longer life-span and more widespread education, a great majority of the working force is aged above 34.

In India, about 81 million workers are above 34. Of them 12 million are above 60. About two-thirds of the workers above 60 are cultivators or agricultural labourers.

WAGES

The regulation of wages is governed by the *Payment of Wages Act, 1936* and the *Minimum Wages Act of 1948*. The former Act applies to persons employed in any factory as defined by the *Factories Act, 1948* and in any railway, and in receipt of wages which average below Rs. 400 a month.

Minimum Wages Act, 1948 empowers the appropriate Government to fix minimum rates of wages payable to employees in industries specified in the Schedule.

Wage Census Scheme has been formulated for envisaging collection of occupational wage rates and earnings data in respect of workers employed in major factories, mining and plantation industries.

Steering Group on Wages consisting of nominees of the Union and State Governments and representatives of workers and employers, studies the trends in relation to wages, production and prices.

Coal Mines Bonus Schemes framed under the *Coal Mines Provident Fund and Bonus Schemes Act, 1948*, apply to all coal mines in India except those in Jammu & Kashmir. Under these schemes, colliery employees except those in Assam, are entitled to receive a third of their basic earnings as quarterly bonus by virtue of a minimum qualifying attendance during the quarter.

WAGE BOARD

In the organised industries, wages are determined mainly through tripartite wage boards. During 1964-65, two new wage boards were set up, one for the engineering industry and the other for ports and docks. Second wage boards were also constituted for cotton textiles and cement. The wage boards set up for tea plantations, iron and steel, working journalists, non-journalist employees of newspapers and coal mines recommended interim wage increases. The wage boards for coffee and rubber plantations have also recommended wage increases for certain categories of workers. The following table gives the position in regard to the various Wage Boards set up so far :

1. Wage Boards which have given final recommendations which have been implemented more or less fully.	Cotton textiles and cement (1st Wage Boards), sugar and jute.
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2. Wage Boards which have given interim recommendations which are being implemented or under consideration.

3. Wage Boards which have not yet made any recommendations.

Tea plantations, iron and steel, coal mines, coffee plantations, rubber plantations, working journalists, non-journalist employees of newspapers, iron ore mining, limestone & dolomite mining, port and dock workers at major ports.

Engineering and second Wage Boards for cotton textiles and cement.

Wage Board for Heavy Chemical Industries—The Government of India has set up on April 6, 1965 a Wage Board for the heavy chemicals and fertilizer industries.

The Board will have its headquarters in Madras. Two independent members (Mr. P. R. Chakravarti, M.P. and Prof. V. V. Ramana-dham), two members representing employers (Mr. D. P. Mathur and one nominee of the Indian Chemicals Manufacturing Association, Bombay) and two members representing workers (one nominee of the Indian National Trade Union Congress and one nominee of the All-India Trade Union Congress) will form the board.

Wage Board for Sugar Industry—Second Wage Board for the sugar industry to consider the question of a further revision of the wage structure in the industry was appointed on November 21, 1965.

The Board, consisting of two representatives each of employers and workers and two independent members, is headed by Mr. K. Bhimasankaram.

The first Wage Board for the sugar industry was constituted in 1957.

New Wage Board would keep in view the needs of the industry in a developing economy, including the need for promoting exports and the "special features" of the sugar industry.

It would also keep in view the need for adjusting wage differentials in such a manner as to provide incentive to workers for advancing their skill.

The headquarters of the Board will be located at Hyderabad.

Interim relief for Cement Workers—Workers in the cement industry in the country will get an interim relief of Rs. 5.46 per mensem with retrospective effect from January 1, 1965. For the purpose of computation of any benefits or allowance, the interim relief would be treated as being in the nature of dearness allowance.

Wages in Coffee Estates—The Government has accepted the recommendations of the Wage Board for the coffee plantation industry which has proposed a new wage structure to remain in force for a period of five years.

The Government has requested employers, workers and the State Governments concerned to implement the recommendations expeditiously.

The wages would start with a minimum from July 1, 1964 and by periodic increase reach the maximum on July 1, 1968.

According to the graduated structure, from July 1, 1968, there would be only two sets of wages, Rs. 2.12 and Rs. 2.20 per day. The former would be applicable in cases below 50 acres in Madras and Mysore States, all estates in Madurai and Salem districts (Madras) and estates below 300 acres in Wynaad (Kerala). The latter would apply to other States.

The Wage Board headed by Mr. L. P. Dave was appointed in July 1961. It had recommended interim relief in 1964.

All coffee plantations except coffee curing works are covered by the Board's recommendations and no differentiation is to be made between contract labour and regular workers of estates in the matter of wages. The daily minimum rates of wages for the field workers have been fixed, which differ between men, women, adolescents and children, as also according to coffee-growing areas and the acreage.

There are two sets of wages for Mysore—one for estates of 50 acres and above and the other for estates of below 50 acres. There are three sets of wages in Madras, for estates of 50 acres and above, for estates below 50 acres and for all estates in Madurai and Salem districts. Kerala will also have three sets of wages, for estates of 300 planted acres and more in Wynaad, estates below 300 planted acres in Wynaad and for all estates in other areas of Kerala.

Non-Journalist Wage Board—The Government of India has accepted the Wage Board recommendations for grant of interim relief to the non-journalist employees of newspaper establishments.

The following are the recommendations of the Wage Board :

(1) The interim relief on the following basis should be granted to non-journalist employees of newspaper establishments.

(a) For 'A' and 'B' Class newspapers a flat relief of Rs. 15 per month ; (b) For 'C' Class newspapers a flat relief of Rs. 10 per month ; (c) For 'D' Class newspapers a flat relief of Rs. 1.50 per month ; (d) For 'E' and 'F' Class newspapers a flat relief of Rs. 5 per month.

(2) This interim relief should be payable to non-journalist employees with effect from May 1, 1964.

(3) The above recommendations are subject to the condition that in no newspaper establishment a non-journalist employee, after taking into account the interim relief recommended above should get less than Rs. 50 per month.

(4) This interim relief shall be payable to non-journalist employees drawing salary upto Rs. 750 per month with marginal adjustments.

(5) If there be any agreement in force on May 1, 1964 between the newspaper establishments and their employees stipulating grant of interim relief, subject to adjustments after the recommendations of the Wage Board are brought into force, those agreements shall stand. If the interim relief already granted is less than that recommended above, the non-journalist employees concerned shall get the difference of the two and if it is more than that recommended above, then they shall continue to get the interim relief already granted to them".

Accepting the recommendations the Government said :

"The wage board has also given the following clarifications in regard to its recommendations.

(1) The classification of newspapers referred to in Clause 1 of the recommendations of the board regarding interim relief is based on the recommendations of the Working Journalists Wage Committee.

(2) Reference to Rs. 50 in Clause 3 of the said recommendations is to the consolidated wage—including basic wage, dearness allowance and other allowances.

(3) In the case of group, multiple and chain newspapers of different classes in the same establishments the non-journalist employees should be given interim relief equal to the average of the quantum of the interim relief recommended for the different classes of newspapers in the said establishments.

(4) Non-journalist employees of the newspaper establishments would mean all those employees of such establishments who are not working journalists as defined under Section 2 (f) of Working Journalists (Conditions of Service) and Miscellaneous Provisions Act 1955".

BONUS COMMISSION

The recommendations of the Bonus Commission have been accepted by Government subject to certain modifications. Government are undertaking legislation to give effect to the recommendations of the Bonus Commission as accepted by them. A draft Bonus Bill was considered at the meeting of the Standing Labour Committee (New Delhi, December, 1964) and subsequently by a sub-committee of the Standing Labour Committee which met on January 3, 1965. The proposed legislation is being finalised in the light of these tripartite discussions.

INDUSTRIAL RELATIONS

The number of man-days lost owing to industrial disputes which is used as an indicator of the climate of industrial relations went up to 73 lakhs in 1964 as against 33 lakhs in 1963.

The Central Government have framed model rules under the *Industrial Employment (Standing Orders) Act, 1946* for adoption by industrial establishments employing 100 or more workers. The Act, as modified in 1961, *inter alia* empowers the appropriate Governments to extend its provisions to establishments employing less than 100 workers.

A *Code of Discipline* has been drawn up to avoid breaches of the Code by settling the disputes between employers and workers by constitutional methods rather than by direct actions.

Evaluation and Implementation Organisation at the Centre persuades the parties to withdraw the cases pending in higher courts or the Supreme Court. The Central Employers' and Workers' Organisations have set up committees for dissuading their affiliate members from filing appeals in higher courts against judgments of Industrial Tribunals or Labour Courts.

There are four *Industrial Tribunals* at present for dealing with disputes in the central sphere. These are located at Bombay, Dhanbad, Calcutta and Delhi.

There is one whole-time Central Labour Court at Dhanbad. The Labour Courts set up by State Governments/Administrations except those in Maharashtra, Goa, Daman and Diu, Himachal Pradesh, Manipur and Tripura have also been specified as Labour Courts for the determination of the money-value of benefits under the Industrial Disputes Act, 1947. The State Government/Administration Labour Courts at Delhi, Quilon and Bangalore have also been specified as Labour Courts for dealing with questions relating to the application or interpretation of certified standing orders under the Industrial Employment (Standing Order) Act, 1946.

Under *Industrial Disputes Act, 1947*, 893 Works Committees in Central undertaking are now functioning.

Tripartite Machinery at the Centre mainly consists of the Indian Labour Conference, the Standing Labour Committee, the Industrial Committees and the Committee on Conventions. There is also the Labour Minister's Conference which is closely associated with the machinery, though not tripartite in character.

Industrial Truce—A joint meeting of the Central Organisations of Employers and Workers adopted a resolution in November, 1962 to the effect that during the Emergency there should be neither interruption nor slowing down of the production of goods and services. In pursuance of the Industrial Truce Resolution, nearly 2000 co-operative stores/fair price shops have been set up. The number of Emergency Production Committees set up under the resolution has gone up to 2000.

Conciliation Machinery—The administration of industrial relation in the Central sphere undertakings rests with the Chief Labour Commissioner.

Workers' Education—The Central Board of Workers' Education is a registered body which implements the workers' education scheme in three distinct phases, namely, the training of top-level instructors, teacher-workers and workers.

Workers' Participation in Management—The scheme of workers' participation in management made some progress. *Joint Management Councils* are functioning in 97 establishments—36 in the public sector and 61 in the private sector.

SOCIAL SECURITY

Employees' State Insurance Act of 1948 applies to all perennial factories using power and employing 20 or more persons and cover labourers and clerical staff with monthly earnings upto Rs. 400. At the end of December, 1964 the insurance scheme was extended to about 26.64 lakh industrial workers in 206 centres in the country.

Minimum Wages Act of 1948 provides for fixing minimum rates of wages in certain employment. Wages mean all remuneration, capable of being expressed in terms of money, but does not include the value of (a) any housing accommodation, supply of light, water,

medical attention, etc., or (b) any other amenity or any service excluded by general or special order of the appropriate Government.

Employees' Provident Fund Act, 1952, which was originally applied to six major industries to provide for the benefit of compulsory provident fund to industrial workers, covered at the end of January 1964, 87 industries and establishments. The Act applies to such factories and establishments in the industries covered as have completed three years of existence where the employment strength is 50 or more, and five years of existence where the employment strength is 20 or more but less than 50 persons.

The Coal Mines Provident Fund Schemes framed under the *Coal Mines Provident Fund and Bonus Schemes Act, 1948*, apply to all coal mines in India. The employees and the employers are to contribute a compulsory 8 p.c. of the total emolument of the employees.

Legislation regarding the payment of *maternity benefits* is in operation in almost all the States. Two Central Acts—the *Employees' State Insurance Act, 1948* and the *Plantations Labour Act, 1951*, also regulate payment of maternity benefits. *The Maternity Benefit Act, 1961* was enacted to provide uniform standards for maternity protection.

The Workmen's Compensation Act, 1923, as amended in 1962, raised the wage limit for the coverage of compensation under the Act from Rs. 400 to Rs. 500 and revised the rates of compensation.

NATIONAL EMPLOYMENT SERVICE

Employment Exchanges originated in India during World War II to resettle demobilised personnel. They were entrusted with the task of finding employment for displaced persons. The Exchanges now render employment assistance to all grades and categories of employment seekers. The Exchanges are run by the Directorate-General of Resettlement and Employment of the Ministry of Labour. The activities of the Directorate are divided into two parts—Employment and Training Schemes.

The Employment Exchanges are under the control of the State Governments since November, 1956. The Central Government has now limited their responsibilities to policy-making, co-ordination of procedure and standards and to rendering of assistance whenever needed. There are 373 Exchanges in the country. Total of applicants on the live register at the end of 1964 was 2,493,000. The *Employment Exchanges (Compulsory Notification of Vacancies) Act of 1960* makes it compulsory for employers usually employing 25 or more workers to notify their vacancies to the Exchanges.

Central Committee on Employment, constituted in 1958, advises the Government of India on problems of employment, creation of employment opportunities and the working of the National Employment Service.

Education of Workers—A programme of industrial workers' education is being implemented for the past six years. A network of workers' education centres has been expanding throughout the

country. The scheme of workers' education has been formed on the recommendation of an international expert committee, appointed by the Government of India in co-operation with the Ford Foundation in 1957. Accordingly, a Central Board for Workers' Education, consisting of representatives of Government, employers, workers and educational institutions, was set up in 1958 to implement the scheme.

The Board has so far opened 62 regional centres and 36 sub-regional centres all over the country and two lakh workers have so far been trained including 5,000 as worker-teachers.

The training programme has three stages. In the first stage, training is given to education officers who are full-time employees of the Board. In the second stage, the education officers are posted at the regional centres where they conduct training classes for selected workers, who in turn become teachers for the ordinary workers. In the third stage, the worker-teachers organise primary centres at the place of work to impart training to workers.

At each stage, the training period is three months. As a part of the training, the trainees go on short educational tours to visit important projects, factories and trade unions. The Board has prepared a large volume of literature in the various regional languages for the information of workers.

There are 284 training centres functioning under the Craftsmen Training Schemes. The other training schemes are the National Apprenticeship Training Scheme, the Scheme for the Training of Industrial Workers and the Revised Scheme for the Establishment of Work and Orientation Centres for Educated Unemployed. Six Central Training Institutes are functioning in Calcutta, Bombay, Hyderabad, Kanpur, Ludhiana and Madras and one Institute for Woman Instructors at New Delhi. A Central Apprenticeship Council has been constituted under the *Apprentices Act, 1961*, to advise the Union Government on matters concerning regulation and control of training of apprentices. To improve the quality of the officers manning the industrial relations machinery, a *Central Institute for Training in Industrial Relations* was set up in Delhi on September 1, 1964.

A *National Institute for Labour Research* has been set up to undertake research on labour matters.

A *National Council for Training in Vocational Trades* has been set up to advise the Government of India on all questions of training policy, to co-ordinate vocational training and to lay down uniform standards.

INDIA AND THE I.L.O.

India has been an active member of the I.L.O. from its very inception in 1919 and is a permanent member of its governing body since 1922 and also a prominent member of the organisation as one of the ten leading industrial countries of the world.

India has been receiving technical assistance from the I.L.O. since 1951 in the following fields— (a) Social Security, (b) Training-within-industry, (c) Vocational Guidance, (d) Employment Service, (e) Productivity.

EMPLOYMENT EXCHANGE STATISTICS

		No. of Exchanges	No. of Registrations	No. placed in Employment
1957	..	181	17,74,668	1,92,831
1958	..	212	22,03,888	2,33,320
1959	..	244	24,71,596	2,71,131
1960	..	296	27,32,528	3,05,553
1961	..	325	32,30,314	4,04,077
1962	..	342	38,44,902	4,58,085
1963	..	373	38,37,995	4,90,894

EMPLOYMENT IN THE PUBLIC SECTOR, 1964

('000 Numbers)

Central Govt.	..	..	..	..	2,527
State Govts.	..	..	..	..	3,506
Quasi-Govt.	..	..	..	..	1,178
Local Bodies	..	..	..	..	1,578
Total					8,789

INDUSTRIAL DISPUTES IN INDIA

(Resulting in work-stoppages involving 10 workers or more)

	No. of dis- putes	Workers involved (in thou- sands)	Loss of man-days		No. of dis- putes	Workers involved (in thou- sands)	Loss of man-days
1950	.. 814	719	12,806,704	1956	.. 1,203	715	6,992,040
1951	.. 1,071	691	3,818,928	1957	.. 1,630	889	6,429,000
1953	.. 772	466	3,382,608	1958	.. 1,524	929	7,798,000
1953	.. 722	466	3,382,608	1959	.. 1,531	694	5,633,000
1954	.. 840	477	3,372,630	1960	.. 1,583	986	6,515,000
1955	.. 1,166	527	5,697,848	1962	.. 1,491	705	6,120,000
				1963	.. 1,471	563	3,269,010

TRADE UNION STATISTICS

	1950-51	1960-61	1962-63
No. of registered Unions	.. 3,766	11,312	11,826
No. of Unions submitting returns	.. 2,002	6,813	7,147
Membership of Unions submitting Returns ('000)	.. 1,757	4,013	3,565

INDUSTRIAL DISPUTES, 1964

	No. of Industrial disputes	No. of Works Committees actually formed and functioning	No. of strikes and lockouts.	No. of workmen involved in strikes and lockouts.	No. of man-days lost
				(P)	(P)
CENTRE	5,557	955	315	1,24,373	6,52,253
States					
Andhra Pradesh	353	133	65	50,722	4,09,205
Assam	341	81	27	14,360	45,363
Bihar	..	..	33	36,377	3,81,338
Gujarat	1,550	68	72	15,112	1,05,321
Jammu & Kashmir	..	..	1	240	720
Kerala	2,437	79	148	62,824	7,13,362
Madras	4,535	424	184	54,204	3,82,773
Madhya Pradesh	612	16	33	14,215	33,168
Maharashtra	3,738@	205	590	2,63,398	15,36,059
Mysore	618	141	83	34,770	1,87,188
Nagaland	..	..	..	..	..
Orissa	162	18	Nil.	Nil.	Nil.
Punjab	1,570	167	39	4,938	49,033
Rajasthan	..	..	41	10,987	53,211
U.P.	4,538(P)	..	165	64,850	6,52,684
West Bengal	6,082 £	637	195	1,81,584	20,31,568
Territories					
Delhi	1,369	24	32	2,722	21,156
Himachal Pradesh	..	..	..	Nil.	..
Manipur	..	..	Not received	..	..
Tripura	..	..	3	398	2,228
A. & N. Islands	9	11	9	2,382	11,658
L. A. & M. Islands	..	..	Nil.	2,382	11,658
Goa, Daman & Diu	60	..	Nil.	Nil.	Nil.
Pondicherry	7	..	..	..	..
Total :	33,538	2,959	2,035	9,38,456	72,68,283

NOTE :

@ Include I.D. Act, Bombay Industrial Relations Act and C.P. & Berar Industrial Disputes Settlement Act.

£ Not included cases reported in Dec. 64 for the regions of Darjeeling, Jalpaiguri and Asansol.

P—Provisional.

ATOMIC ENERGY

BIRTH OF ATOMIC ENERGY IN INDIA—Under the Industrial Policy Resolution of 1948, atomic energy in India was made the exclusive subject of the Government. India created an *Atomic Energy Commission* as early as in 1948. It is responsible for improvement of atomic energy for peaceful purposes. The programme aims at the use of atomic energy in agriculture, biology, industry and medicine, through the production and application of radio-

isotopes and at the development of atomic energy as a source of electric power. The programme is under the charge of the Department of Atomic Energy.

The *Department of Atomic Energy* was set up only in August, 1954 and it was in March, 1965, that the Atomic Energy Commission decided to build at Trombay, near Bombay, the reactor of the pool type using enriched uranium fuel elements.

NUCLEAR RESEARCH—The Department of Atomic Energy is responsible for formulating and implementing policies regarding atomic energy. The scientific and technical work of the Department is carried on by the *Atomic Energy Establishment*, Trombay and the *Atomic Minerals Division*. The industrial activities of the Department are conducted by the *Indian Rare Earths Ltd.* and *Travancore Minerals Ltd.* The national centre for research and development of atomic energy is the *Atomic Energy Establishment* at Trombay near Bombay. The Establishment is organised under five major groups, namely, physics, chemistry, electronics, metallurgy and biology. These groups are further sub-divided into 15 divisions.

PROGRESS OF ATOMIC ENERGY—Since the establishment of the Department of Atomic Energy in August, 1954, research and development in the peaceful uses of atomic energy has made rapid stride.

The first large-scale nuclear reactor *Apsara* of the swimming-pool type was put into operation on 4th August, 1956 and it contributes to the power supply of India. It is a megawatt pool type reactor. As by-products from this reactor, several types of isotopes have been isolated and applied to Indian medical and biological works, while much research and experimental work has been carried out with the unit. The primary object of the *Apsara* reactor is not to provide electrical power on a large scale but to give experience to India's technicians in manipulating nuclear plant.

This small-sized reactor, which costs Rs. 35 lakhs, is producing radio-isotopes which are already being extensively used by Indian agriculture, medicine and industry, and research workers at the universities. *Apsara* is the nation's principal facility for training personnel in reactor technology and for fundamental research in physics, engineering and biology.

India's second research reactor is the Rs. 7½-crore *Canada-India Reactor*, which is a 40-mw reactor and which went into operation on 4th July, 1960.

It is one of the largest isotope producers in the world and has special facilities for the in-pilo testing of engineering loops for future power reactors. It is a joint Indo-Canadian project. The reactor embodies a steel shell of 159 ft. high by 120 ft. in diameter, built up by welding accurately shaped steel sheets together.

India's third reactor is known as *Zerlina*. This is a zero energy reactor for lattice investigations and new assemblies which went into operation on 14th January, 1961.

An experimental fast reactor is to be set up near Madras at a

cost of Rs. 60 crores in the next two years. It will be of the same Canadian type as the second one to be built in Rajasthan.

ATOMIC FUEL—For achieving self-sufficiency in the nuclear field, it was decided in May 1956 to set up a plant for producing reactor grade uranium metal, as well as a fuel element fabrication facility. The Uranium Metal Plant was commissioned by the middle of December 1958; and the first nuclear pure ingot of uranium metal was produced on January 30, 1959, from uranium fluoride obtained from the Thorium Plant at Trombay. The latter had been built in 1955 for processing thorium cake obtained from the monazite sands on the Kerala beach.

Fabrication of fuel elements for reactors is a highly skilled and complex job. This is borne out by the fact that in the world today there are only about half a dozen countries making their own fuel elements. On the basis of development work carried out at Trombay, the preliminary flow-sheet for the plant was finalised in November 1957; and it was completed in less than twenty months after this, *engineered and built entirely by Indian metallurgists and engineers.* The first prototype fuel element for CIR was produced on June 15, 1959, and the first lot of ten fuel elements was ready on February 15, 1960. Indian fuel elements have some of the finest grained uranium metal in the world.

PLUTONIUM PLANT—Trombay scientists and engineers have also successfully designed, built and commissioned a Fuel Element Reprocessing Plant (Plutonium Plant) for processing irradiated uranium rods to extract plutonium and other fissionable materials. Plutonium is an extremely valuable fissile material and atomic fuel for future reactors. It is of great importance to the long-term power programme of the country as plutonium reactors can be used to breed uranium 233, also a fissile material, from thorium.

INSTRUMENTATION EQUIPMENT—As atomic radiations cannot be perceived by the senses, electronic instruments and radiation detectors are needed not only to detect the dangerous levels of radiation but also to carry out research in various fields. A small electronics group was formed in 1955 to design, fabricate and install reactor control instrumentation as well as produce other instruments required for the reactors at Trombay. After completing this task in 1960, this group was expanded and diversified in order to utilise fruitfully the experience gained in this field. Today, the Establishment produces most of the electronic instruments needed not only for its own work but also by other institutions employing radio-isotopes and radiation sources.

High vacuum equipment constitutes one of the essential requirements for nuclear work. The Trombay Establishment has developed and fabricated a number of high vacuum instruments. The Trombay Establishment designed and fabricated a plant capable of freeze-drying 600 bottles or 180 litres of blood plasma per month. This was the first unit of its kind to be built in India and it has been installed at the Haffkine Institute in Bombay. Trombay is now developing mobile freeze-dryer units.

RADIO-ISOTOPES—Radio-isotopes and radiation sources are perhaps the most versatile tools of the Atomic Age. One of the tasks of the Department of Atomic Energy has been to make these tools available to workers in agriculture, biology, industry, medicine and research all over the country. The production of radio-isotopes and labelled compounds at Trombay has steadily increased over the years and today more than 250 different types of radio-active products including many special preparations, are readily available for users.

A Radiation Medicine Centre was set up in Bombay last year to promote the use of radio-isotopes in the diagnosis and treatment of diseases.

Labelled vitamins and fats have also been used to study tropical malabsorption syndrome, and the knowledge thus gained has made a rational treatment of these diseases possible.

INDUSTRIAL ACTIVITIES—The Department of Atomic Energy also carries out industrial operations. The industrial undertakings of the Department include *Travancore Minerals Ltd.* (See also *Index*) and *Indian Rare Earths Ltd.* (See also *Index*)

MINERAL PROSPECTING—*Indian Atomic Minerals Division* has been established with the object of prospecting and mining of atomic minerals, the most important of which is uranium, but which also include thorium, beryllium, zirconium, lithium, etc. It has discovered and is mining uranium deposits at Jaduguda, near Jamshedpur. The Atomic Minerals Division has also discovered new deposits of monazite in Bihar, which are larger than the deposits on the Kerala coast, till then the largest in the world. The mineral sands in Kerala are now exploited by the Department of Atomic Energy. The *Travancore Minerals Ltd.* separates the various components of the sand, the most important of which are covers for arc lamps, polishing powder for mirrors etc; the Rare Earths salts are lamps, polishing powder for mirrors etc; the Rare Earths salts are used in the manufacture of carbon covers for arc lamps, polishing powder for mirrors and for special optical lenses. Rare Earth metals are used in the form of mica in metallurgy and in the preparation of alloys and flints. The thorium plant at Trombay is operated by Indian Rare Earths on behalf of the Department of Atomic Energy and separates the thorium and uranium from the residue sent by the Alwaye Plant. Zircon allanite, from which zirconium can be extracted has been discovered in Andhra and Madras States. Hafnium is associated with zirconium in some of the deposits. The mineral fergusonite, source of yttrium, has been located in Madurai area, Madras. In Udaipur of Rajasthan, extensive deposits of uraniferous ore have been found. India is one of the world's largest producers of mineral beryl, from which beryllium can be extracted. Beryllium oxide, obtainable from the metal, is an important material used as a reactor moderator.

ATOMIC POWER STATIONS—India's first atomic power station is being built at Tarapur in Maharashtra, 60 air miles from Bombay,

with an installed capacity of 400 MW, supplied from two units of 200 MW each. After allowing for internal consumption, the supply of power to the grid will be 380 MW. The grid system of Gujarat and Maharashtra will be interlinked through a switchyard erected adjacent to the station. The cost of the project including preparation of site, construction of housing colony, provision of roads, water etc., will be about Rs. 48.5 crores or Rs. 1,275 per kilowatt of sent out capacity. The foreign exchange component will be about Rs. 32.3 crores. This as well as the fabrication cost of the initial charge (amounting to about Rs. 5.5 crores) will be financed under a \$ 80-million loan given by the U.S. Agency for International Development. Considerable work has been done in setting up this atomic power plant and it is likely to be in operation by 1968. This station, apart from producing electrical power and providing creative activity in the industrial field, will play another important role, in that it will also produce plutonium, a valuable atomic fuel. Tarapur projects is based on the use of enriched uranium which would have to be imported from the U.S.A. The station will use only about 25 tonnes of uranium per year, which will cost Rs. 2.5 crores.

This atomic power station will have a second reactor of 200 MW capacity which will cost about Rs. 30 crores. The total charge of fuel requirements to start the reactors and keep them running is about 80 tonnes.

A health laboratory where samples of earth, air, vegetable, food and water collected over a radius of 20 miles are periodically checked for radio-activity, has also been set up. Each of the project's two reactor pressure vessels will be over 200 tons in weight and 53 ft. long with a diameter of 12 ft.

Second atomic power station will be started at Rana Pratap Sagar in Kotah in Rajasthan. The second power station at Kotah will be of the Canada-type power station, developed in Canada, using natural uranium oxide as fuel and heavy water as moderator and coolant.

The third atomic power station is to be located at Kalpakkam, near Mahabalipuram in Madras State. This Rs. 60-crore project will also have two reactors of 200 MW capacity each.

SPACE RESEARCH—For launching sound rockets for investigation of the upper atmospheric winds and the equatorial electrojet and to aid and advise in the formulation and execution of policies on the peaceful uses of outer space, the Department has set up an *Indian National Committee on Space Research* (INCOSPAR). Seven sounding rockets have been successfully fired since November 21, 1963 from the Thumba Equatorial Rocket Launching Station in Kerala.

Launching Facility in Kerala—A sounding rocket landing facility has been set up in Kerala in co-operation with the National Aeronautical and Space Administration (NASA) of the USA.

RESEARCHES AND FINANCIAL ASSISTANCE—To promote research in nuclear science, subventions are granted to various universities, laboratories and research institutions. The Tata Institute of Fundamental Research, Bombay is the national centre for advanced

study and fundamental research in nuclear science and mathematics. Other institutions receiving support of the Atomic Energy Department, are the Saha Institute of Nuclear Physics, Calcutta and the Physical Research Laboratory, Ahmedabad. A high-altitude research laboratory is being established at Gulmarg in Kashmir at an altitude of 9,000 ft. for high-altitude work in cosmic rays, biology, physiology and other subjects. A similar laboratory is also to be established at Kodaikanal in Madras.

INDIA'S POSITION IN THE WORLD ATOMIC ENERGY—India has been renominated to the Board of Governors of U.N. International Atomic Energy Agency as being the most advanced country in atomic energy development in South Asia. The I.A.E.A., which came into being on July 29, 1957, is a specialised agency of the U.N. "to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world."

INDIAN SPACE RESEARCH

A rocket for the study of outer space was launched on 21st November, 1963 from Thumba, near Trivandrum, marking the beginning of space research in India. This research is being conducted by the Indian National Committee for Space Research.

The sounding rocket range which was prepared at Thumba would afford unique facilities for scientific research to those interested in meteorology and atmospheric research.

The establishment of launching site has been prescribed through the collaboration and active assistance of many countries advanced in space technology. The initial work at Thumba was based on agreements concluded between the Department of Atomic Energy and *National Aeronautical and Space Administration (NASA)* of the U.S.A. Other facilities have been made through agreements with the Academy of Sciences of the USSR and the Space Research Organisation of France.

The Indian National Programme for sounding rockets was mainly aimed at studying the region of the atmosphere from 40 km. to 200 km. Observations could be made with balloons upto 40 km. and artificial earth satellites could operate satisfactorily above 200 km.

The programme would involve two types of rockets. The small rocket would be able to take instruments weighing upto 10 kg. to heights of about 70 km. and would fall into ocean some 50 to 100 km. to the west of the launch pad.

A bigger two-stage rocket would be used to carry the scientific instruments weighing upto 40 kg. to heights upto 150 km.

The first two-stage unguided rocket was launched successfully from the Equatorial Sounding Rocket Station at Thumba, 15 miles from Trivandrum, on 21st November, 1963.

The assembling and launching of the rocket was done by Indian scientists trained by the National Aeronautical and Space Administration of the U.S.A.

At the zero hour, the two-stage rocket weighing 1,600 pounds and carrying a 67-pound pay-load of sodium vapour and equipment, shot up like a jet flame and soared to a height of 180 kilometres, developing a maximum velocity of 2,400 miles per hour.

The first-stage rocket burnt itself out in three-and-a-half seconds, leaving a mushroom of smoke and a cascade of sparks. The second-stage rocket then went into action and released the sodium vapour. It left a trail of orangish vapour of the shape of an inverted cone with the nose-end spinning it out into a zigzag pattern. The second-stage rocket was burnt out in about six minutes.

Work on the project was entrusted to the Department of Atomic Energy in September, 1961, actually commenced with the setting up of the Indian National Committee for Space Research in Feb. 1962.

PROHIBITION

BEGINNING OF PROHIBITION—From the days of the first Satyagraha Movement by Mahatma Gandhi in 1921, prohibition has been one of the main items of the Congress Movement in the country. The Article 47 of the Indian Constitution has laid down as a Directive Principle of State Policy that "State shall endeavour to bring about prohibition of the consumption, except for medicinal purposes, of intoxicating drinks and drugs which are injurious to health." In 1937, when popular Ministries came into power in the majority of provinces, the experiments in prohibition were then first carried out. Comprehensive legislation was passed in five provinces, i.e., Madras, C. P. and Berar, Bihar, Orissa and N.W.F.P. between 1937 and 1939. With the withdrawal of popular Ministries in 1939, the movement received a setback. The new Constitution of India again gave a fresh life to this movement in 1950.

In 1954, Prohibition Enquiry Committee recommended that schemes of prohibition should be integrated with the country's development plans and this was affirmed by a resolution of the Lok Sabha on 31st March, 1956.

A *Central Prohibition Committee* has been set up in pursuance of a recommendation of the Prohibition Enquiry Committee to review the progress of prohibition programmes, co-ordinate the activities in different States and keep in touch with their practical difficulties.

A programme was formulated by the Planning Commission, which left to each State to fix a target date and to formulate its policy in accordance with local conditions and circumstances. The Commission, however, recommended the adoption of certain measures like discontinuance of advertisements and other inducements, stoppage of drinking in public premises, setting up of technical committees, etc., etc.

PRESENT STATE OF PROHIBITION IN INDIA—Following are the conditions of prohibition in India :—

In *West Bengal*, no prohibition programme has been taken up, but Government has imposed dry days in industrial areas and reduced the hours of transaction in the excise shops.

Bihar has constituted a Prohibition Board, to consider the details of policy and to review the progress of revision from time to time.

In *Andhra Pradesh*, complete prohibition is in force in the districts of Anantapur, Chittor, Cuddapah, East Godavari, Guntur, Krishna, Kurnool, Nellore, Srikakulam, Visakhapatnam and West Godavari. In other districts, toddy and liquor shops have been shifted from populous areas.

Madras—Total prohibition is in force since October 2, 1948.

In *Delhi*, restrictions on the saleable strength of the country liquor, and the number of country liquor shops, reduction in the quality of retail sale to individuals, reduction in the sale hours, increase in the rates of duty, enhanced punishment for repeated prohibition offences and minimum punishment for illicit distillation have been imposed.

Maharashtra—Prohibition is in operation in the entire Maharashtra State from April, 1961.

Uttar Pradesh—In place of the earlier complete prohibition in only eleven districts and three pilgrim centres, partial prohibition has been affected from December, 1962.

Mysore—Prohibition is in force in the entire State, except the districts of Bangalore, Gulbarga and Raichur. Prohibition is now relaxed. The relaxation would be brought into two stages. First stage has begun. The second stage is to take effect in January, 1966. To the people who are more than 30 years of age, the permits on health grounds would be issued on the basis of Doctor's certificate.

Orissa—Prohibition is in force in the districts of Ganjam, Koraput, Cuttack, Balasore and Puri.

Punjab—Prohibition exists in the district of Rohtak only.

Rajasthan—Prohibition is in force only in Abu taluk in Sirohi district.

Assam—Total prohibition of opium is in force throughout the State. Total prohibition of liquor is also in force in the districts of Kamrup and Nowgong and Goalpara. Consumption of *ganga* and *bhanga* has been prohibited throughout the State from April, 1959.

Tripura—Excise shops are closed for one day in a week and selling hours have been reduced. The sale of *ganja* through Government agencies has been withdrawn from April, 1959.

Gujarat—There is a complete prohibition in the whole of Gujarat.

Kerala—Complete prohibition is in force in the whole of Kozhikode, Palghat, Cannanore and Trivandrum districts and also in five taluks in Quilon and Trichur districts and in Fort Cochin area of Ernakulam district. All opium and *ganja* shops in the State have been closed.

Madhya Pradesh—Prohibition has been in force in the districts of Sagar, Damoh, Narsimhapur, Hoshangabad, Khandwa and Vidisha and portions of Bilaspur, Raipur and Durg districts. A system of permits has been introduced in tehsil of the Jabalpur district. Prohibition will shortly be relaxed in 7 districts of M. P., avoiding a loss of Rs. 2 crores.

Himachal Pradesh—There is total prohibition in the Bilaspur district and the sub-divisions of Mahasu, Mandi and Chamba districts.

Manipur—Issue of licences for local distillation of country liquor has been discontinued since 1958 and special permits are issued to individual tribals for local distillation of liquor on festive and religious occasions.

COMMUNITY DEVELOPMENT

OBJECTIVES OF THE COMMUNITY DEVELOPMENT—The programme seeks to change the social and economic life and outlook of the rural people, raise farm production and income and create from stagnant backward villages a vital, progressive rural community. It is a programme of aided self-help to be planned and implemented by the villagers themselves, the Government offering only technical guidance and financial assistance. Its objectives are to develop self-reliance in the individual and initiative in the village community. The programme was launched on October 2, 1952 in 55 selected projects. Agriculture receives the highest priority in the programme. Other objectives are communications, health and sanitation improvements, education, better housing, measures for women's and children's welfare, development of cottage and small-scale industries, etc. The Panchayat, Co-operative and school are the basic institutions at the village level for carrying out the programme. The elected Panchayat has the charge of all development programmes in the area.

The programme is implemented through units of blocks, each comprising generally 100 villages and an area of 150 or 200 sq. miles and a population between 60 and 70 thousand. In 1959, the Government decided that the responsibility, power and resources for planning and execution of development programme should be delegated to the people's institutions.

The entire country has now been covered by the C.D. programme. There are 2709½ Stage—I blocks, 1910 Stage—II blocks and 601 Post-Stage—II blocks, besides 18 blocks in the pre-extension phase.

ADMINISTRATION (AT THE CENTRE)—The *Ministry of Community Development and Co-operation* is responsible for overall control of the programme. The basic policy matters are referred to the Central Committee, consisting of the members of the Planning Commission and the Ministers for Food and Agriculture and Commu-

nity Development and Co-operation under the Chairmanship of the Prime Minister.

State Administration—Implementation of the programme is the responsibility of the State Governments which work through State Development Committees. The executive head of the programme is the Development Commissioner who co-ordinates activities of all development departments.

District Administration—The newly created statutory Zillah Parisads are responsible for the implementation of the programme in the districts. The Parisads consist of elected representatives of the people, including the Presidents of the Block Panchayat Samitis and M. P.s and M.L.A.s of the district.

Block Administration—At the block level, Block Panchayat Samiti is in charge of the programme. The administrative personnel, consisting of a Block Development Officer and eight Extension Officers, work under the direction of the Samiti.

FINANCE—Resources for the programme are drawn both from the people and from the Government. For each block area, development schemes are conditioned by a qualifying scale of voluntary contribution from people in cash or kind or labour. When State assistance is offered for execution of such projects, expenses are shared by the Central and the State Governments equally in respect of recurring items, and in proportion of 3 : 1 in the case of non-recurring items. For productive works like irrigation, reclamation of land, etc., funds are advanced by the Central Government to the State Governments in the shape of loans. The Central Government also bear half of the expenditure on all personnel employed by the States in blocks.

TRAINING—The *National Council for Study and Research in Community Development* supervises the entire training programme implemented through a network of training centres.

The *National Institute of Community Development* which is the apex institution, functions through the Study and Research Wings at Mussorie and the Instruction Wing at Rajpur Dehra Dun. The Study Wing offers orientation courses to key personnel. The Research Wing undertakes investigation of current problems.

There are 12 *Orientation and Study Centres* mainly for the training of Block Development and Block Extension Officers, 8 Centres for the training of Social Education Organisers and 10 centres for *Mukhya Sevikas*.

There are other centres conducted by the respective State Governments under the supervision of the Government of India, where training to Gram Sevaks and Gram Sevikas as well as refresher training to Extension Officers is given.

Tribal Orientation and Study Centres extend training in tribal life and culture to the staff working or to be posted in Tribal Development Blocks. There are four such centres at Bhubaneswar, Jabalpur, Udaipur and Ranchi.

COVERAGE OF COMMUNITY DEVELOPMENT BLOCKS

<i>States/Union Territories</i>	<i>No. of blocks delimited</i>	<i>Population covered (in lakhs)</i>	<i>Villages covered (in hundreds)</i>
Andhra Pradesh ..	445*	334	271
Assam ..	160	118	257
Bihar ..	575	452	677
Gujarat ..	224	194	186
Jammu & Kashmir ..	52	32	66
Kerala ..	142	162	16
Madhya Pradesh ..	416	309	704
Madras ..	375	303	141
Maharashtra ..	425	328	359
Mysore ..	268	217	264
Nagaland ..	16	4	8
Orissa ..	307 ..	174	465
Punjab ..	228	192	213
Rajasthan ..	232	189	322
Uttar Pradesh ..	899	690	1,126
West Bengal ..	341	301	385
Union Territories ..	133	47	209

*Since re-delimited into 321 blocks.

PANCHAYAT SYSTEM

The Indian Constitution has expressed in the Directive Principles that "the State shall take steps to organise village Panchayats and endow them with such powers and authority as may be necessary to enable to function as units of self-government" (Article 40).

Regarding Panchayats, Mahatma Gaudhi had repeatedly said, "Indian independence must begin at the bottom. Thus, every village will be a republic or panchayat having full powers. It follows, therefore, that every village has to be self-sustaining and capable of managing its affairs, even to the extent of defending itself against the whole world. It will be trained and prepared to perish in the attempt to defend itself against any onslaught from without. Thus ultimately, it is the individual who is the unit."

The background of the Panchayat movement is as follows—In 1880, the Finance Commission had recommended that "in most parts

of India some village organisation exists, which offers a ready and natural, though still imperfect, machinery for coping with famine, and it is of special importance that whatever is possible should be done, towards improving and strengthening this machinery where it is present, so that it may become more thoroughly efficient for purposes of village relief." On the recommendation of the Royal Commission on Decentralisation in 1907-8, the Secretary of State for India recognised the need "to take early steps to make all local bodies from village panchayats upwards elective with elected non-official chairmen and to support them with adequate aid." The Indian National Congress at Lahore in 1909 supported the recommendations of the Royal Commission.

After independence, the then Prime Minister Nehru in his address to the first Local Self-Government Ministers' Conference in 1948 declared that "Democracy at the top could not be a success unless it is built on the foundation from below." The Programme Evaluation Organisation of the Planning Commission observed in 1956 that the only representative organisations like Panchayats should be responsible for rural development and all efforts should be directed towards creating and strengthening these institutions. The most outstanding achievement in community development during last few years has been the acceptance and implementation of the scheme of *Panchayati Raj* throughout the country.

Panchayati Raj was not introduced all over the country on a particular day. Panchayati Raj is the concern of the States which enjoy autonomy in their affairs, and are free to introduce it when it is convenient to them. Only general directions about the broad pattern of the system have been issued from the Centre. That is why there are variations within the broad pattern in the system from State to State.

Rajasthan was the first State to introduce the system on October 2, 1959, followed by Andhra Pradesh, Mysore and Madras in 1959. Orissa and Assam joined in 1960 and Punjab, Uttar Pradesh and Bihar in 1961. Maharashtra and Gujarat introduced it in 1962. The remaining States are in different stages of preparing for the system. The set-up varies according to the special conditions from State to State. However, the general pattern remains the same.

It is an integrated three-tier system—the *Zillah Parishad* at the district level, *Panchayat Samiti* at the block level and *Gram Panchayat* at the village level and the three are organically linked up. The members are elected.

Panchayats are elected by Gram Sabhas consisting of the entire adult population of the village. They are responsible for agricultural production, rural industries, medical relief, maternity and child welfare, management of common grazing grounds, maintenance of village roads, streets, tanks and wells, sanitation, etc. There are 2,19,694 village Panchayats functioning in the country, covering approximately 99 p.c. of the entire rural population. Panchayats federate at a higher level in a body called *Sarpanchas* as *ex-officio* members. While the administrative, civic and executive functions at

the village level are attended to by the Panchayats, the judicial functions are exercised by separate bodies known as *Nyaya Panchayats*. Their powers of punishment are limited to the imposition of moderate fines, and they employ simple and summary procedure for the disposal of cases. Legal practitioners are not allowed to appear before them.

Progress of Legislation—Panchayati Raj was in force at the end of 1963-64 in 10 States, i.e., Andhra Pradesh, Assam, Gujarat, Madras, Maharashtra, Mysore, Orissa, Punjab, Rajasthan and Uttar Pradesh.

During 1964-65, it was introduced in West Bengal in all the districts except Murshidabad. Elections to Gram Panchayats have been completed in Madhya Pradesh. In Bihar, the Bihar Panchayat Samitis and Zila Parishads Act was enacted in February 1962 and a notification was issued in August, 1963 for bringing Panchayati Raj into force in four districts. Formal inauguration of Panchayati Raj has taken place in only two districts, namely, Ranchi and Bhagalpur, on 2nd October, 1964.

Training—The State Governments have launched a programme of training the members of the Panchayats at the *Panchayati Raj Training Centres*. Of the 122 centres sanctioned so far, 101 have already been set up by various State Governments. The *Central Institute of Study & Research in Panchayati Raj* has been functioning since 1962, under the auspices of the All-India Panchayat Parishad. It conducts three-month courses for the training of trainers—Principals and Instructors—from the Panchayati Raj Training Centres.

Some Defects—This village management or Panchayati Raj has some defects which require proper assessment. The Panchayats are not in any sense independent self-governing institutions. They have no legislative power of any kind except making routine bye-laws within the ambit of the law under which they function. Their financial actions are subject to audit and surcharge. Their deliberative system though governed by decisions by majority vote, are subject to revision or veto by State authority. Their functions are no more confined to what may be called 'civic functions' which could be autonomous, but are extended to what are called development works. They are now legally, in truth, agents of nation-building departments of the Government functioning under delegated authority.

Panchayats : Old and New—The new Panchayats are completely different from those of old times, which were composed of elders (usually five) in whom the village had confidence. Those Panchayats dealt with villagers direct and not through representatives and their decisions were universally binding. The villagers had direct access to the Panchayats. Their 'Raj' was completely insular, but all pervasive. The new Panchayats have now responsibility for development activities, which the old panchayats did not have. The new Panchayats are to be miniature replicas of the State Governments at the village level, but with only deliberative body.

Coverage of Panchayats, Panchayat Samitis and Zila Parishads

States and Territories	No. of Panchayats	No. of Panchayat Samitis	No. of Zila Parishads	No. of villages covered by Panchayats	Rural population covered by Panchayats (in lakhs)
Andhra Pradesh	15,268	378	20	27,084	297
Assam	2,570	120	16	17,717	83
Bihar	10,702	59*	2*	67,510	421
Gujarat	11,536	182	16	18,208	183
Jammu & Kashmir	960	..	..	6,559	30
Kerala	922	..	..	1,574	144
Madhya Pradesh	21,301	..	..	70,414	277
Madras	12,562	374	21	13,983	247
Maharashtra ..	19,741	293	25	35,492	281
Mysore	7,450	172	20	26,377	183
Orissa	2,340	313	13	47,939	158
Punjab	13,452	226	18	21,269	162
Rajasthan	7,391	232	26	32,240	169
Uttar Pradesh ..	72,333	854	51	1,12,624	643
West Bengal ..	19,649	325**	14**	38,530	264
A. & N. Islands ..	30	..	..	107	0.45
Delhi	215	5***	..	276	3
Goa, Daman & Diu	159	..	245	265	5
Himachal Pradesh	637	6	5	10,438	13
Manipur	227	..	..	518	5
Tripura	248	..	..	N.A.	N.A.
ALL INDIA	2,19,694	3,539	247	5,49,187	3,538

* Panchayati Raj bodies were constituted in 2 districts, viz., Ranchi and Bhagalpur in October, 1964.

** In West Bengal, Anchal Panchayats and Zila Panchayats started functioning with effect from 2-10-64.

*** Non-statutory Panchayat Samitis.

N.A.—Not Available.

CO-OPERATION

The co-operative movement in India began in 1904 as a measure for the relief of chronic rural indebtedness. The scope of the Act of 1904 was confined to the formation of credit societies only. But during the operation of the Act, a number of serious defects was found; so in 1912, another Act was passed, which permitted for the

first time the organisation of non-credit societies in India. In 1914, the MacLagan Committee was appointed for the further improvement of co-operative movement. According to its recommendation, the Montford Reforms of 1919 made co-operation a provincial transferred subject. From 1925 provincial Governments began to enact separate *Co-operative Societies Act*. But the matter did not improve and progress in India was very slow. In 1935, the Reserve Bank of India organised Agricultural Credit Department, as an important wing of its activities. The Government of India appointed the *Co-operative Planning Committee* in 1948, which recommended that primary societies should be converted into multipurpose societies and that efforts should be made to bring 50 p.c. of the villages and 30 p.c. of the rural population within the sphere of recognised societies within 10 years.

In 1951, the Reserve Bank of India appointed a *Rural Credit Survey Committee* to report on the whole structure of co-operative movement in India. In 1954, this Committee recommended an integrated scheme of rural credit. The main recommendations were—(1) State partnership in co-operative institutions at all levels (2) full co-ordination between credit and other allied economic activities, specially marketing and processing (3) development at the base of viable primary agricultural credit societies (4) establishment of warehousing organisation (5) nationalisation of the Imperial Bank of India for providing vastly extended remittance facilities for co-operative and other banks.

Acceptance of recommendations—The Government of India accepted these recommendations. The Reserve Bank of India Act was amended to provide funds to *Co-operative Societies* and *National Agricultural Credit (long term of operation) Fund* was established in February 1956 with an initial contribution of Rs. 10 crores. Subsequently in July, 1950, a *National Agricultural Credit (Stabilization) Fund* with an initial capital of Rs. 1 crore, was also established. The Fund can be drawn upon for giving medium-term loans and advances to State Co-operative Banks to enable them to convert short-term credit to medium-term credit.

The Government also set up a *National Co-operative Development and Warehousing Board* in Sept. 1956 to promote the development of co-operative activities and to assist in the progress of processing, marketing, storage, warehousing and import of agricultural produce through co-operative societies and warehousing corporations. The Board administers two funds called *Co-operative Development Fund* and *Warehousing Fund*, to build up large non-credit societies and a chain of warehouses all over the country.

Two other Corporations—*Central Warehousing Corporation* and *State Warehousing Corporation* have been also set up.

Recent Orientation of the Co-operative Policy—A *Committee on Co-operative Credit* was appointed under the Chairmanship of V. L. Mehta in 1959 to consider the different aspects of the expanding agricultural credit. The Government of India in June, 1960 issued the following fresh directives—

(a) In organising village societies, the aim should be to ensure viability with the inclusion of the smallest number of villages necessary, so that the co-operative society achieves both viability and the essential characteristics of co-operation, namely, voluntary basis, close contact, social cohesion and mutual obligation.

(b) A State may participate in the share capital of viable primary agricultural credit societies on a matching basis. Such participation should ordinarily be limited to Rs. 5,000 and could go up to a maximum of Rs. 10,000 in exceptional cases.

TRAINING—There is an *All-India Co-operative Training College* at Poona for training senior officers of the co-operative departments and institutions. There are five regional training centres for the training of intermediate grade personnel and eight institutions for the training of block level co-operative officers working in the community development blocks. Training schools also exist in the States for the training of junior co-operative officers.

CO-OPERATIVE FARMING—Nagpur session of the Congress in 1958 adopted a resolution favouring the adoption of joint co-operative farming in the country. It also stated that “as a first step prior to the institution of joint farming, service co-operatives should be organised throughout the country.” It recommended the period of three years to cover the entire country with service co-operatives. The scope of service co-operative means—(1) supply of good seeds and fertilizers and the production of manures in the village itself, (2) irrigation, (3) marketing of produce, (4) credit and (5) joint use of implements and modern mechanical aid. Since, in India, the holdings are often uneconomically small and resources of an individual farmer very meagre, the service co-operatives help a group of farmers to export their labour and stock of goods. India being mainly an agricultural country, the service co-operatives are primarily needed for the agricultural community. But these co-operatives can further extend their scope to cover the various crafts, mostly ancillary to agriculture in the rural areas.

New Developments in Co-operative Farming—Due to the increased work of co-operation, a separate Department of Co-operation under the Ministry of Community Development was created in 1958.

The substantial increase in India's agricultural production is the only way of success of the Plans and also future of the country. Various committees appointed by the Congress and the Planning Commission recommended co-operative farming as the only solution to the food problem of India. The Planning Commission in its first report adopted “co-operative village managements” as its ideal. The Second and Third Plans also supported this objective.

Service Co-operatives—As a step towards the introduction of co-operative farming, a non-official resolution was adopted in the Lok Sabha in 1959, envisaging the formation of service co-operatives. The Nijalingappa Committee was formed in June 1959 to formalise

and ensure the establishment of co-operative farming in India. The report of the Committee, published in 1960, outlined the programme indicating the preparatory work and their requirements regarding the formation of co-operative farming societies.

Plans and Progress—A comprehensive programme of development of co-operative farming during the 3rd Five-Year Plan has been formulated. Co-operative farming envisages organisation of 320 planned pilot projects at the rate of one per district in selected community development blocks where Panchayati Raj institutions and co-operatives have made progress. Each pilot project would consist of a minimum of ten co-operative farming societies demonstrating the advantages of co-operative farming. 115 co-operative farming societies registered during the 1st and 2nd Plan period, were classified as joint and collective farming societies.

National Co-operative Farming Advisory Board has been set up for planning and promoting the programme of co-operative farming in the States.

Main defects of co-operative farming are : (1) Co-operative farming is alien to the genius of the people ; (2) There is a strong attachment to land among the peasants ; (3) It would lead to the creation of communism ; (4) It would hinder the growth of a farmer's personality ; (5) It would destroy farmer's initiative and also lead to the fall in production.

Co-operative Banking Organisation—owes its origin to the Co-operative Societies Act of 1904 and amended by the Act of 1912. Under this Act, all classes of registered societies are spoken of as 'Societies'. In actual practice, however, primary units are in some States known as banks and in others as societies. Co-operative banks comprise State and Central Co-operative Banks and registered non-agricultural (urban) co-operative credit societies with limited liability, each having minimum paid-up capital and reserves of Rs. 1 lakh. They are sub-divided into two classes, namely, A' bank or banks with capital and reserves of Rs. 5 lakhs and above each, and B' banks or banks with capital and reserves ranging between Rs. 1 lakh and Rs. 5 lakhs each.

The co-operative banking system consists of the Provincial Bank at the apex, the affiliated Central Banks, and lastly, the primary societies affiliated to the Central Banks. According to the rules under the Act, these banks cannot generally lend to the non-members. The Central Co-operative Banks' principal function is to act as the balancing centre of their affiliated societies and to channel funds to the primary societies.

The functions of co-operative banks are as follows—(1) attracting deposits from money-lenders and professional classes, (2) lending money to the primary co-operative societies, (3) taking away excess fund of a co-operative society and utilising it for making up deficiencies in the fund of others, (4) supervising and guiding the actions of affiliated societies.

STATISTICS OF CO-OPERATIVE SOCIETIES

Central Co-operative Banks—			State Co-operative Banks—		
	1951-52	1961-62		1951-52	1961-62
Number	.. 509	387	Number	.. 16	21
Membership	2,31,319	3,95,600	Membership	23,272	30,468
Working Capital	353 crores		Working Capital	256 crores	
Grain Banks—			Agricultural Credit Societies—		
As on June 1962 :			As on June 1962 :		
Number	.. 9,190		Number	.. 2,15,081	
Membership	.. 1,232,000		Membership	.. 1,95,72,000	
Working Capital	6.08 crores		Working Capital	325.33 crores	
Non-Agricultural Credit Societies—					
As on June 1962 :					
Number	.. ..	12,477			
Membership	.. ..	4,969,000			
Working Capital	.. ..	165 crores			

Central Land Mortgage Banks are the pivot of the structure of longterm finance to agriculturists through the primary land mortgage banks, raise their funds mainly by the issue of debentures. The defaulters are guaranteed by the State Governments in respect of the repayment of principal and the payment of interest.

	1951-52	1960-61
Number	 6	17
Membership	 34,579	2,99,383
Working Capital	 62 crores	
Share Capital	 44 lakhs	5.73 lakhs
Reserve Fund	 25 lakhs	74 lakhs

NUMBER, MEMBERSHIP AND WORKING CAPITAL OF
CO-OPERATIVE SOCIETIES, 1962-63

Number of Societies	.. ..	3,46,000
Membership	.. ..	43 million
Working Capital	.. ..	Rs. 17,690 million

LEGAL AFFAIRS

MINISTRY OF LAW—Legal affairs of the Government of India are looked after by the Ministry of law. The main functions of the Ministry of Law are to advise other Ministries and Departments of Government on legal matter including interpretation of laws, conveyancing and litigation, to draft Central Bills, Ordinances and Regulations and follow them up in their various stages upto their enactment or promulgation, to draft bills and ordinances for States, whenever necessary, to scrutinise statutory rules and orders from the legal

and drafting points of view and to make arrangements for the publication of Central enactments. Besides, this Ministry is responsible for legislative and other actions pertaining to subjects allotted to it including elections to Parliament, Legislatures of States and the offices of the President and the Vice-President and with matters relating to the Election Commission, the Law Commission, Delimitation Commission, Official Language (Legislative) Commission and the Income-Tax Appellate Tribunal.

The Ministry functions in two Departments—*Department of Legal Affairs* and *Legislative Department*. The Department of Legal Affairs which has also Branch Secretariats at Bombay and Calcutta, deals with advice on legal matters and matters relating to elections, the Election Commission and the Income-Tax Appellate Tribunal. The Legislative Department deals with the work (arising in all Ministries) relating to the drafting of Bills, Ordinances and Regulations and the scrutiny of statutory rules, orders, notifications, etc. It is also concerned with the Official Language (Legislative) Commission which deals with the planning and implementation of the programme relating to translation of statutes and preparation of a standard legal terminology for use in all the Indian languages. The work relating to the implementation of the recommendations of the Law Commission and the printing, publication and translation of Central Laws is also done by this Department.

DEPARTMENT OF LEGAL AFFAIRS

It has the following sections :

(1) **Advise Section**—This Section advises other Ministries and Departments on legal matters, including interpretation of the provisions of the Constitution and the various statutes, statutory rules, orders, etc. and Government litigation. It deals with the drafting and scrutiny of contracts and other instruments to be executed by or in favour of the Central Government. Bills reserved for the assent of the President are examined from the legal aspect.

(2) **Litigation Section**—This Section handles Civil litigation of the Central Government in the Circuit Bench of the Punjab High Court and the subordinate Courts in Delhi. The main function of this Section is to collect and scrutinize the papers furnished by the various Ministries/Departments in respect of their cases and to brief the Counsel. This Section is also responsible for scrutinizing bills of Counsel's fees and certifying them to the Department concerned for payment.

(3) **Judicial Section**—This Section deals with the work relating to the engagement of various Law Officers of the Government for conducting litigation on behalf of the Central Government.

(4) **Central Agency Section**—This Section looks after the conduct of civil and criminal cases before the Supreme Court, in which the Central Government or the various State Governments participating in the Central Agency scheme are interested. All the State Gov-

ernments except those of Assam, Kerala, Madhya Pradesh, Madras, Uttar Pradesh and West Bengal are participating in the scheme.

(5) **Election Section**—This Section deals with all matters relating to election law, election expenditure, the administration of the Representation of the People Acts, 1950 and 1951 and the rules made thereunder—and all administrative matters concerning the Election Commission and the Delimitation Commission. This Section is also in charge of administrative work of the Income-Tax Appellate Tribunal. It has twelve Benches—three each at Bombay and Delhi, two in Calcutta, and one each at Allahabad, Hyderabad, Madras and Patna.

The Branch Secretariat at Bombay gives legal advice to the Central Government offices located at Bombay, attends to all litigation work in the High Court at Bombay on behalf of the Central Government and also exercises general supervision on litigation in subordinate courts, in which Central Government is interested. Drafting of instruments relating to immovable property in Bombay and agreements and contracts to which Central Government is a party is also undertaken by this Branch.

The Branch Secretariat at Calcutta gives legal advice to all Central Government offices situated at Calcutta except the Railway and the Income-tax Departments. Legal advice to these two Departments as well as the work relating to conveyancing and Central Government litigation continues to be done by three Central Government Solicitors, who are independent of the Branch Secretariat.

LEGISLATIVE DEPARTMENT

(A) **Legislative I Section** is in charge of the drafting of all Bills, Ordinances and Regulations, which are enacted or promulgated by the Centre. In addition, the Legislative I Section is concerned with the drafting of model Bills for the States whenever so required. The drafting and enacting of Bills as President's Acts are also the concern of this Section. The scrutiny of all subordinate legislation—statutory rules, orders, notifications bye-laws etc., from the legal, constitutional and drafting points of view is also done in this Section.

(B) **Legislative II Section** deals with the work relating to Legislative proposals on subjects in the concurrent field, which have been allocated to this Ministry. It is also concerned with the processing of action for the implementation of the recommendations as contained in the reports of the Law Commission. This Section also compiles and publishes a summary of all Central and State Acts, Ordinances and Regulations passed or promulgated during each year.

(C) **Publication Branch**—functions in four Sections:—(1) *Publication Section*; (2) *General Statutory Rules and Orders Section*; (3) *Correction Section*; and (4) *Printing Section*. The main function of the *Publication Section* is to bring out from time to time modified editions of Central Acts and to issue other important publications like the 'Constitution of India', etc. *General Statutory Rules and Orders Section* deals with work in connection with the revised edition of the *General Statutory Rules & Orders*. *Correction Section* is responsible

for maintaining a large number of sets of Central and State Acts, Ordinances and Regulations and other important publications. *Printing Section* is in charge of editing and printing work relating to Bills, Ordinances and Regulations and other publications.

(D) *Translation Section*—This Section prepares Hindi versions of Central Acts and publish them in diglot (Hindi-English) form, translates into Hindi all the Statutory Rules, Orders, Ordinances, Regulations, etc., assists in the preparation by Official Language (Legislative) Commission of the authoritative Hindi texts of Central Laws, in the compilation of a standard legal lexicon and in the exploratory work with regard to the evolution of standard legal drafting in Hindi.

(E) *Law Commission*—The functions of this Commission are as follows : (i) to review the system of judicial administration in all its aspects and suggest ways and means for improving and making it speedy and less expensive ; and

(ii) to examine the Central Acts of general application and importance and recommend the lines on which they should be amended, revised, consolidated or otherwise brought up-to-date. The Commission which started functioning on September 16, 1955, has two Sections. The First Section deals mainly with the question of the reform of judicial administration. The Second Section deals mainly with the statute law revision.

The Commission completed its first work regarding the reform of judicial administration in September 1958. With the submission of Report on the reform of judicial administration, the Commission as constructed in 1955 ceased to function.

The Commission was again reconstituted on December 20, 1958. The terms of reference of the reconstituted Law Commission are to examine the Central Acts of general application and importance and recommend the lines on which they should be amended, revised, consolidated or otherwise brought up-to-date. The main objectives are : (1) to simplify, the laws in general, (2) to ascertain if any provisions are inconsistent with the Constitution and suggest necessary alterations, (3) to remove anomalies and ambiguities brought to light by conflicting decisions of the High Court or otherwise, (4) to consider local variations introduced by the State legislation in the concurrent field, with a view to reintroducing and maintaining uniformity, (5) to consolidate Acts pertaining to the same subjects, (6) to suggest modifications for implementing the Directive Principles of State Policy of the Constitution, (7) to suggest a general policy in revising the laws.

The Law Commission has been reconstituted for a further period of three years with effect from the 20th December, 1964. During 1964-65, the Commission was mainly engaged in the revision of the Code of Civil Procedure, 1908. Earlier, the Commission finalised its report on Insolvency Laws. The Commission also proceeded further with its study of : (a) The abolition of capital punishment ; (b) The General Clauses Act, 1897 ; (c) The Indian Oaths Act, 1873 ; and (d) The Indian Registration Act, 1908.

(F) **Official Language (Legislative) Commission**—is a Standing Commission constituted in pursuance of the Order of the President, dated the 27th April, 1960, issued under Clause (6) of Article 344 of the Constitution of India. The Commission has been set up for the proper planning and implementation of the entire work relating to the preparation of a standard legal terminology for use, as far as possible, in all Indian languages, and the preparation of authoritative texts in Hindi of Central statutes and rules and orders, etc., made thereunder. The Commission is also required to make arrangements for the translation of Central Laws into regional languages and the Hindi translation of State Laws which are not in Hindi. The Commission consists of 8 whole-time members and 10 part-time members representing the various regional languages of India.

SUPREME COURT OF INDIA

Supreme Court of India is the highest judicial body of India, standing at the apex of a single unified judicial system for the whole country. It is the guardian and interpreter of the Indian Constitution and acts as the custodian of all the liberties of the citizens.

The Supreme Court of India consists of a Chief Justice and fourteen judges appointed by the President. (See *Index* for the names of the Supreme Court Judges).

The Judges hold office till the age of 65. The Constitution debars retired Judges of the Supreme Court from practising in any court of law or before any other authority in India.

Provision has also been made for the appointment of a Judge of a High Court as an *ad hoc* Judge of the Supreme Court and for retired Judges of the Supreme Court to sit and act as Judges of that Court.

Supreme Court of India has both *original* and *appellate jurisdiction*. Its *original jurisdiction* extends to all disputes between the Union and one or more States or between two or more States *inter se*. In addition, it has an extensive original jurisdiction in regard to the enforcement of fundamental rights of the Constitution. It is empowered to issue directions or orders or writs including those in the nature of writs of *habeas corpus*, *mandamus*, prohibition, *quo warranto* and *certiorari*, whichever may be appropriate, to enforce these rights.

Appellate jurisdiction of the Supreme Court can be invoked, by a certificate of the High Court concerned or by special leave granted by the Supreme Court, in respect of any judgment, decree or final order of the High Court in cases involving substantial questions of law as to the interpretation of the Constitution. Appeals lie also to the Supreme Court in civil matters where the amount or value of the subject matter of the dispute is not less than Rs. 20,000 or where the judgment, decree or final order involves decrees respecting property of like amount, or where the High Court concerned certifies that the case is a fit one for appeal to the Supreme Court.

In criminal cases, the right of appeal to the Supreme Court has been provided for, "if the High Court (a) has on appeal reversed an order of acquittal of an accused person and sentenced him to death, (b) has withdrawn for trial before itself any case from any court subordinate to its authority and has in such trial convicted the accused person and sentenced him to death, or (c) certifies that the case is a fit one for appeal to the Supreme Court." Parliament is authorised to confer on the Supreme Court any further powers to hear and entertain appeals from any judgment, final order or sentence in a criminal proceeding of a High Court in Indian territory.

The Supreme Court has a very wide appellate jurisdiction over all courts and tribunals inasmuch as it can grant special leave to appeal from any judgment, decree, determination, sentence or order in any case or matter passed or made by any court or tribunal of India. It has also special advisory jurisdiction in matters which may specifically be referred to it by the President under Article 143 of the Constitution.

HIGH COURTS—have the power to issue to any person or authority including any Government within its jurisdiction, directions or orders or writs for the enforcement of any of the rights conferred by Part III of the Constitution or for any other purpose. High Courts have powers of superintendence over all courts and tribunals within their jurisdiction.

They can call for returns from such courts, make and issue general rules and prescribe forms to regulate their practices and proceedings and forms in which books, entries and accounts shall be kept.

The judiciary is independent of the executive and the legislature.

HIGH COURTS OF INDIA

Every State of India has a High Court. The list of such courts is given below—

<i>Name</i>	<i>Territorial Jurisdiction</i>	<i>Seat of the Court</i>
Allahabad	.. Uttar Pradesh	.. Allahabad (Bench at Lucknow)
Andhra Pradesh	.. Andhra Pradesh	.. Hyderabad
Assam & Nagaland	Assam & Nagaland	Gauhati
Bombay	.. Maharashtra	.. Bombay (Bench at Nagpur)
Calcutta	.. West Bengal, Andaman & Nicobar Islands	.. Calcutta
Gujarat	.. Gujarat	.. Ahmedabad
Jammu & Kashmir	Jammu & Kashmir	Srinagar & Jammu
Kerala	.. Kerala, Laccadive, Minicoy & Amindivi Islands	.. Ernakulam
Madhya Pradesh	.. Madhya Pradesh	.. Jabalpur (Benches at Indore & Gwalior)

Madras	..	Madras & Pondi- cherry	..	Madras
Mysore	..	Mysore	..	Bangalore
Orissa	..	Orissa	..	Cuttack
Patna	..	Bihar	..	Patna
Punjab	..	Punjab & Delhi	..	Chandigarh (Bench at Delhi)
Rajasthan	..	Rajasthan	..	Jodhpur

SUBORDINATE COURTS

Civil Justice—The structure and functions of the subordinate courts in the mufassil, with minor local variations, are more or less uniform throughout India. Each State is divided into a number of districts. Each district has a District Judge. This is the principal Civil Court. Subordinate to him are civil judicial authorities of different grades. Besides hearing suits, the Civil Courts exercise jurisdiction over several other matters, such as guardianship, marriage and divorce, testamentary and intestate representation and admiralty jurisdiction.

Criminal Justice—Code of Criminal Procedure regulates the administration of criminal justice and the constitution of Criminal Courts. The officer presiding over the district court in civil cases is the Judge of the Sessions Division for criminal cases in that district. He deals only with the more serious crimes and take cognizance of cases only when they have been committed to him by a Magistrate after a preliminary enquiry.

The exercise of preventive jurisdiction in certain matters and the trial of crimes listed as not triable by a Sessions Court are entrusted to Magistrates of various classes under the general supervision and control of the District Magistrate. In respect of nearly all judicial acts, the magistracy including the District Magistrate is subject to the control of the High Court. Some classes of cases involving minor crimes are tried by Honorary Magistrates and by benches of Magistrates.

LOCAL GOVERNMENT

Local self-governing institutions are in general divided into two classes—urban and rural. In big cities, we have *Corporations* and in medium and small towns *Municipalities* or *Boards*. The pattern of local government in rural areas has recently been changed and a three-tier structure known as *Panchayati Raj*, has been introduced in different States. This Panchayati Raj is a three-tier system of local governing bodies at the village blocks and the district level. Specific powers and functions in the field of development and local administration have been assigned to the Panchayati Raj institutions.

Corporations—are established by specific Acts of the State Legislatures and headed by elected Mayors. The administration of a city under a Corporation is entrusted to these authorities—(1) General

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Council of the Corporation, (2) Standing Committees of the Council and (3) the Commissioner or Executive Officer.

Municipal Boards and Committees—Municipalities with elected Presidents also function through Committees. All the members of a municipality constitute its general body which discusses and decides all questions of policy and important details of municipal administration. The powers of passing the budget, imposing taxation, voting expenditure and making rules and regulations vest in the general body. The day-to-day work is carried on by an executive officer, drawn either from the State cadre of municipal executive officers or from State Civil Service.

Village Panchayats—(See *Index* for 'Panchayat System' Section)

Separation of Judiciary from Executive—Under Article 50 of the Indian Constitution, separation of Judiciary from Executive has been carried out in several States, such as, Andhra Pradesh, Gujarat, Kerala, Madras, Maharashtra, Mysore, West Bengal, Madhya Pradesh and Bhopal region of M.P., 10 districts of Punjab, 9 districts of Orissa, 12 districts of Bihar and 47 districts of U.P. Broadly speaking, this system divides all the powers and functions of a Magistrate under two heads—(1) judicial and (2) non-judicial. The officers discharging judicial functions have been placed under the High Court. For purely judicial work, only those qualified in law are eligible to become Magistrates. Similar schemes with modifications to suit local conditions have been introduced in other States.

IRRIGATION

BASIS OF INDIAN IRRIGATION—The two chief characteristics of rainfall in the country are its unequal distribution in different regions and uneven precipitation in different years. The variation in distribution ranges from an average of as high as 460 inches in a region in Assam, to as low as 3 inches or so in arid Rajasthan; the average for the whole country being a little over 42 inches. Because of the uncertainty of rainfall, Indian agriculture has been described as a "gamble in the monsoon." The result has been that agricultural development in India has not kept pace with the growth of population. To make the country self-sufficient in food production, it is, therefore, necessary that the area under cultivation must be increased by means of greater irrigation facilities throughout the country.

INDIA'S WATER RESOURCES—India's water resources have been provisionally estimated at 1,35,60 lakh acre-feet, of which approximately 4,500 lakh acre-feet are believed to be usable for irrigation. The possibilities of diverting the normal flow of rivers into irrigation canals have been almost exhausted. The plans for the future development of irrigation, therefore, aim at impounding by dams the surplus river-flow during monsoon for use in dry weather. In areas unsuitable for flow-irrigation, the construction of minor

irrigation works, such as tanks and wells and the installation of water-lifting devices have been planned.

The irrigated area in the country is now 70.0 million acres, recording a rise of 18.5 million acres over the pre-Plan 1951 figure. India has so far put to use 27 p.c. of the total dependable annual supplies of water available to her. It has been estimated that the quantity of water that flows down the rivers of India is nearly 1,356 million acre-feet.

SECRETARIAT OF THE MINISTRY—This Ministry of the Govt. of India was constituted in 1952. Besides laying down the national policy for the development of water and power resources, the Ministry performs the following functions:

1. Provision of financial and technical assistance to State Governments and Union Territories in the field of irrigation; power, flood control, drainage, anti-water logging and anti-sea erosion measures;
2. Regulation and development of inter-State rivers and river valleys;
3. Research on river valley projects and flood control works;
4. Applied research in power;
5. Watching the progress of execution of projects in irrigation and power and costs against estimates;
6. Examination of schemes formulated by the States for inclusion in Plans;
7. International questions relating to the conservation, regulation and exploitation of river water resources, and aid received for development of irrigation and power in India and similar aid given to other countries by India.
8. Arranging allocations of foreign exchange and materials;
9. Implementation of the Indus Waters Treaty, 1960.

Indus Waters Treaty, 1960—A treaty fixing and delimiting the rights and obligations of India and Pakistan in regard to the use of Indus System of Rivers, was signed between India and Pakistan on September 19, 1960. In accordance of the treaty both the Governments created a permanent post of Commissioner for Indus water. As required under Article 5 of Indus Waters Treaty, 1960, 4 out of 10 annual instalments of £62,06,000 each of the fixed Indian contribution towards the cost of replacement works in Pakistan, have been paid to the World Bank for credit to the Indus Basin Development Fund.

Central Board of Irrigation and Power—constituted in 1957 it is responsible for the situation of fundamental reason in the country in the field of irrigation and power and the co-ordination of the work of 21 research stations in the country.

CENTRAL WATER AND POWER COMMISSION—This Commission is responsible for initiating and co-ordinating schemes for multi-purpose river development, for preparing integrated plants for thermal power development, transmission and utilisation of electric energy and navigation, and for dealing with the flood problem. This

is the highest expert body of irrigation and power engineers at the Centre. The Commission consists of a Chairman, a Vice-Chairman with three members of the Water Wing and three members of the Power Wing. For the effective discharge of its functions the two Wings of the Commission have been divided into following Directorates and Cells—

Water Wings—(1) Administration and Co-ordination, (2) Waterways, Irrigation and Navigation, (3) Technical Examination, (4) Plant and Machinery, (5) Dams, (6) Canals, (7) Cost Control, (8) Union Territories, (9) Investigations, (10) Flood Control, (11) Hydrology and Statistics, (12) Soil Conservation, (13) Technical Man-power and Stores, (14) Surface Water Studies, (15) Progress Recording, (16) Flood Estimation, (17) Central Water and Power Research Station, Poona, (18) Central Soil Mechanics and Concrete Research Station.

Power Wings—(1) Transmission, (2) Rural Electrification, (3) Union Territories, (4) Load Survey, (5) Technical Examination & Co-ordination, (6) Commercial, (7) Foreign Exchange, (8) Hydro-electric planning, (9) Super Grid, (10) Thermal Planning, (11) Progress Investigation, (12) Specialised Engineering Organisation, (13) Plan Construction and Procurement, (14) Manpower, (15) Delhi Cell, (16) Power Research Institute, Bangalore.

A Technical Committee constituted by the Planning Commission, on which C.W. and P.C. is represented, is charged with the assessment of water resources and their utilization. The Commission is assisted by 2 Chief Engineers who are in charge of the work relating to floods.

National Projects Construction Corporation—(See *Index*)

FLOOD CONTROL AND SOIL CONSERVATION—Due to unprecedented floods in different parts of the country in monsoon season, the Government of India have established *Central Flood Control Board* at the top to co-ordinate the work of various State Flood Control Boards and River Commissions. 15 State Flood Control Boards assisted by their Technical Advisory Committees, at the State level, and 4 River Commissions at the inter-State level are functioning in the country. A Committee has been formed on Scientific Flood Forecasting in December, 1963. A *Flood Wing* has been added to the C.W. & P.C. In Jammu & Kashmir a high-level body, Jammu & Kashmir Flood Control Board, has also been functioning since 1959. A Flood Forecasting Unit of the C.W. & P.C., established in 1958, deals with the studies for evolving a suitable flood forecasting technique. The Soil Conservation Directorate of the C.W. & P.C. is maintaining close liaison with the State Governments, Ministry of Food and Agriculture and Planning Commission.

MAIN TYPES OF IRRIGATION—(1) *Canal Irrigation*—Canals draw their waters from rivers or from artificial storage. River canals are of three classes—Inundation canal, Perennial canal and Storage canal.

(2) The rest of the irrigation is done through *tanks, surface percolation wells, tube-wells*, etc. The term *minor* applies to this type of irrigation.

(a) Surface percolation wells exist all over the country.

(b) Tanks and Reservoirs—The water collects either in natural depression on the beds of streams of dammed-up and shallow basins created for storing water.

(c) Flood irrigation and inundation irrigation are the other sources of minor irrigation in India. The monsoon flood water of rivers is diverted to lands which are above the level of the ordinary supply in a river. The flood water soaks the lands and the moisture retained in the soil allows cultivation of a winter season crop, which otherwise would not be possible.

(d) Tube-wells—This means lifting of water from underground by means of mechanical pumps.

The irrigation is again divided into three classes by the Government :—

(1) *Productive*—The capital for the construction and extension of this class is provided out of borrowed money or by appropriation from Famine Insurance Grant, and which is expected to yield within ten years of their completion sufficient revenue to pay their working expenses as well as the interest on the capital expended on their construction.

(2) *Unproductive*—Unproductive works are those which yield a net revenue and are less than the percentage fixed for productive works. These are constructed primarily as protection against famine, and the cost of construction is provided out of current revenue or by appropriation from Famine Insurance Grant.

(3) *Minor*—These are small works for which detailed capital or revenue accounts are not maintained; such works may be either productive or unproductive.

Dams and Barrages—It is necessary to understand the difference between a dam and a barrage in connection with river valley projects. Any obstruction built to stem the flow of water in a stream is a dam and from this point of view, a barrage also is a dam. But a dam has come to be synonymous with a comparatively high structure built to form a reservoir and a barrage with a structure which controls and regulates the flow of water.

RESEARCH—Considerable importance has been attached to the aspects of research on problems of irrigation and power projects. Central Board of Irrigation and Power is in charge of fundamental and basic research throughout the country and the Central Water and Power Commission has two organisations in the Water Wing, namely, Silt and Construction Material Directorate and the Central Water and Power Research Station, Poona.

Silt and Construction Material Directorate—assists in carrying out surveys, investigations, collection of essential silt data. The Directorate has four divisions.

Central Water and Power Research Station, Poona,—continues its research activities in a comprehensive field of research for solving a variety of difficult and complex problems in pure and applied fluid mechanics from foundation and construction materials analysis.

The work of power research has been given due attention with

the establishment of *Power Research Institute, Bangalore*. A unit in Bhopal has been established for the construction of a permanent laboratory building which has been entrusted to the Heavy Electricals Ltd. (See *Index*).

RIVER VALLEY PROJECTS

Projects—The State Governments are primarily responsible for the planning and execution of irrigation and power projects. Most of the major multi-purpose projects are, however, being financed entirely by the loans from the Central Government. To ensure their efficient, economical and early execution, Control Boards, consisting of representatives of the Central and the State Governments concerned, have been set up for each major project. Only exception is the Damodar Valley Project, for which a statutory corporation, viz., the Damodar Valley Corporation has been set up.

Bhakra-Nangal Project—The Bhakra Dam ranks among the greatest engineering feats of the world. It has two largest diversion tunnels, besides the largest unit of lined canal system. It has also the largest belt-conveyor system and the biggest power houses in Asia. It is the biggest multi-purpose project in India. It is estimated to cost Rs. 175 crores.

Bhakra-Nangal Project consists of—(1) a 740 ft. high dam across Sutlej at Bhakra, (2) 95 ft. high Nangal Dam, (3) 40 mile long Nangal hydal channel, (4) one power house on the left bank of the Bhakra Dam, (5) two power houses on the hydel channel at Ganguwal and Kotla and (6) about 652 miles of canals and 2,200 miles of distributaries.

This Project has been practically completed. The full installed capacity of the Project is now 604 mw. The area to be irrigated annually by the Bhakra canals will be 36 lakh acres on full development.

Bhakra Right Bank Power Project—is actually an adjunct of the main Bhakra-Nangal Project. Ultimate installed capacity of the Project is 600 mw. The approved estimate of the cost of the Project is Rs. 35 crores.

Beas Project—It is a joint venture of Punjab and Rajasthan with two units—(1) Beas-Sutlej Link and (2) Beas Dam at Pong. The first unit envisages the diversion of the Beas water into Sutlej to avail itself of 1,000 ft. fall at Dehar and 400 ft. fall at Bhakra for generation of electric power, etc. The total power potential is 733 MW. This Project will provide irrigation to a culturable commanded area of 13 lakh acres. The power portion of the scheme has been accepted at a total estimated cost of Rs. 96.67 crores. The second unit, Pong Dam is located near Pong village about 24 miles from Mukerian. It will be an earth-cum-rockfill dam rising 350 ft. above the river bed. The unit is expected to cost about Rs. 111 crores.

Gandak Project—An international agreement on the Gandak Irrigation and Power Project between the Government of Nepal and the Government of India was signed on December 4, 1959. The agreement was further modified in April, 1964. The project was

inaugurated by the King of Nepal. The project is primarily an irrigation project though a small quantum of power will also be generated. The project will cost Rs. 52 crores. It is an inter-State project in which Bihar and Uttar Pradesh are the participating States, while irrigation and power benefits would also accrue to Nepal. The Project envisages the construction of a barrage with a road-cum-railway bridge across the river Gandak at Bhaissalotan in Bihar. There will be two canal systems—Eastern Canal System and Western Canal System. The Project comprises (1) 2,437 ft. long barrage with a road-bridge across the Gandak at Bhaissalotan, Bihar, (2) one power house with three generating units on the main western canal in Nepal territory, (3) two canals.

Damodar Valley Corporation—The aim of this multi-purpose Project is to tame the turbulent Damodar and its tributaries which overflow their banks and bring destruction and misery to large parts of Bihar and West Bengal. It is a joint venture by the West Bengal, Bihar and Central Governments.

The project comprises the construction of a series of four dams on the main Damodar river and its tributaries of Konar, Tilaiya, Maithon and Panchet hills with hydro-electric stations attached to the last three, three thermal power stations one each at Bokaro, Durgapur and Chandrapura, a net work of transmission and distribution lines of about 1,725 miles and the Durgapur Barrage and Irrigation system of 1,550 miles of canals. The project is expected to afford flood protection to the Damodar Valley, to generate about 9,79,900 kw of hydro-electric and thermal power and to extend irrigation facilities to an area of 10,26,000 acres.

Tilaiya Dam is located about 12 miles from Kodarma railway station across the Barakar river. It is a straight all-gravity concrete dam with earthen extension on either side. It is 1,200 feet long and 99 feet high. Its storage capacity is 3,20,000 acre-feet.

Konar Dam is located in Hazaribagh district of Bihar, across the Konar river. The storage capacity of the reservoir is 273,000 acre-ft. and the waterspread is 10.3 sq. miles. 160 ft. high, this Dam is a composite structure with a concrete section 848 feet long and earthen embankments on the flanks running to a total length of 11,639 ft. It was completed in 1954.

Maithon Dam is situated 16 miles from Asansol railway station across the Barakar river. It is a rolled earthen dam with concrete spillway. The height of the Dam is 162 ft. and it is 2,062 ft. long. It is mainly designed for flood control. The underground hydro-electric station near this dam has a capacity of 60,000 kilowatts. The concrete spillway of the dam is 612 ft. long. On either side, a total length of 14,462 feet of earthen dyke stretches round the reservoir.

Panchet Hill Dam is in Dhanbad district of Bihar, across the Damodar river. It is the largest of the dams in the Damodar Valley. It is primarily designed for flood control and power generation. It comprises an earthen dam 7,135 feet long and 134 feet high, a concrete spillway 1,215 feet long and 13,805 feet of dykes and stores 12,14,000 acre-feet of water. The power house provides for a gene-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh rating capacity of 40,000 kilowatts initially. The Dam was inaugurated in December, 1956.

Tenughat Dam—An agreement has been evolved by the Irrigation and Power Ministry with the Governments of West Bengal and Bihar on the construction of a dam at Tenughat on the Damodar river. The water from the dam is to be available to a super-thermal power station at Bhojudi.

Durgapur Barrage is situated about a mile from Durgapur railway station and 25 miles from Asansol across the Damodar river. It is 2,271 feet long and 38 feet high and was opened in August, 1955. It will irrigate through a network of canals and distributaries. Nearly 85 miles of the main left bank canal will be navigable and provide an alternative means of communication between Calcutta and coal-fields of Raniganj.

Bokaro Thermal Power House is about 12 miles downstream of the Konar Dam in Hazaribagh district of Bihar. It was commissioned in February, 1953 and is now supplying power to various consumers to the full extent of its installed capacity of 1,63,000 kilowatts. The power is being consumed by Tatas at Jamshedpur, Hirapur, copper mines at Ghatsila, coal mines of West Bengal and Bihar, industries around Asansol, Sindri and Calcutta.

Durgapur Thermal Power Station—This station with an installed capacity of 150,000 kw. is expected to cost Rs. 1.32 crores.

Chandrapura Thermal Power Station—About 75 p.c. of the work on the two units has been completed.

Present Set-up of the D.V.C.—The Project in Damodar Valley has been practically completed. The operation and maintenance of the barrage and irrigation system have been transferred to the Government of West Bengal from 2nd December, 1963 in the interest of economy and efficiency. The operation and maintenance wing of the Electricity Department of the D.V.C. has been transferred to Maithon.

Ghataprabha Project—envisages the construction of a Left Bank Canal 71 miles long taking off from the existing Dhopdal weir to irrigate 2.98 lakh acres in Belgaum and Bijapur districts and a masonry dam at Hidkal to store 21,300 m.cft. The estimated cost of the Project is Rs. 3,042.00 lakhs.

Farakka Barrage Project—is intended for the preservation and maintenance of the Calcutta Port and the navigability of the Hooghly river, and will comprise a barrage across Ganga at Farakka with a rail-cum-road bridge over it, a barrage across the Bhagirathi and a feeder canal tailing into Bhagirathi. For the execution of the Project, Farakka Barrage Control Board was set up in April, 1961.

The object of the Farakka Project is to save Calcutta Port from silting up. Calcutta is an inland port situated on the left bank of the Hooghly. The Hooghly serves as a navigation channel between the sea and the port. The main stream of the Ganga flows through another branch, namely Padma, and the Hooghly gets waters only when the Ganga is in high floods. On the other hand the tidal bores in the sea ride on into the Hooghly and deposit heavy sediments year

by year. To flush the sand and silt back into the sea, it is necessary to release water stream into the Hooghly in the upper reaches. The Farakka barrage is being built mainly with this purpose. This solution for the deteriorating port of Calcutta was conceived as far back as in 1858 by expert British engineers. At the time of partition, the claim of India on the Ganga waters was accepted and the areas adjoining Farakka were distributed on this basis between India and Pakistan. Secondly, the Ganga flows through India, and only 1.5 per cent of its water are contributed by Pakistan region. Thirdly, the Farakka Project will help to reduce floods in the neighbouring areas of Pakistan. Thus, there is no case for Pakistan to take any objection to the project.

Tista Multi-purpose Project—envisages the construction of a barrage across the river Tista in West Bengal. It is programmed in two phases—(1) Tista Multi-purpose Barrage and (2) Tista Dam. The first phase of the Project is intended to generate hydro-electric power of 48,000 kw.

Chambal Project—The Chambal rises in the northern slopes of the Vindhya at an elevation of 2,800 feet and flows across M. P., Rajasthan and Uttar Pradesh. This multi-purpose project jointly executed and shared by M. P. and Rajasthan will be completed in three stages. The 1st stage of the Project consists of the construction of Gandhi Sagar Dam, a power house at the foot of the dam with 5 units of 23,000 kw each, transmission lines, Kotah Barrage, and Irrigation Canal System. The 2nd stage envisages the construction of a masonry dam on the main river (Rana Pratap Sagar Dam), a saddle dam across Padajhar valley on the left flank and a power station of 4 units of 43,000 kw each below Rana Pratap Sagar Dam. Stage III of the Project comprises Kotah Dam and a power station at its toe, about 15 miles below the Rana Pratap Sagar Dam.

On completion, the Project will produce 2,30,000 kw of power at 60% load factor and irrigate 14 lakh acres of land.

Malaprabha Project—envisages the construction of a 145 ft. high masonry dam across the Malaprabha river, a tributary of Krishna, at a site 700 ft. downstream of the entrance of the peacock gorge near village Vatnal in Belgaum district of Mysore State. A Right Bank Canal will irrigate an area of 3 lakh acres. The estimated cost of the Project is Rs. 2,000.00 lakhs.

Tungabhadra Project—This is a joint undertaking of Andhra Pradesh and Mysore. It comprises a 7,942 feet long and 162 feet high dam on the Tungabhadra river at Mallapuram. The Project consists of a masonry dam across the Tungabhadra, a 127-mile long Left Bank Canal with a power house, a 217-mile long Low Level Canal with two power houses and a 122-mile long High Level Canal. On completion, the Project will irrigate 10,10,300 acres of land and generate 99,000 kw. of power.

Parambikulam-Aliyar Project—is a multi-purpose multi-valley Project for the benefit of Madras and Kerala States. The estimated cost of the Project for both irrigation and power benefits is Rs. 48 crores. The Project envisages the construction of 7 reser-

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voirs for harnessing the rivers Nirar, Sholayar, Parambikulam, Tunakadavu, Peruvairipallem, Tekkadi and Aliyar, 12 miles of tunnels, a weir, 30 miles of lined contour canal and 120 miles of lined main canals. The reservoirs will irrigate an area of 2,40,000 acres in the dry and arid regions of Coimbatore district, in addition to stabilising and augmenting the irrigation supplies in Chittur area of Kerala State and production of power to the extent of 195 mw.

Hirakud Dam Project—The Hirakud Dam Project in Orissa which involves the construction of the longest dam in the world, 15,748 ft. long, consists of a concrete-cum-masonry-cum-earth dam across the Mahanadi river, 9 miles upstream of Sambalpur, with two canals for irrigation and hydro-electric installations.

Stage I—The development of irrigation and power under Stage I of the multi-purpose Hirakud Project has been completed in all respects and is being maintained and operated by the Govt. of Orissa from 1st April, 1960. The entire irrigation system comprising the main canals and branches, distributaries and minors have been completed. Irrigation facilities have been provided for the entire commanded area of 3.8 lakh acres. The vast network of transmission lines of the main power house at the toe of the Dam with an installed capacity of 123 mw has been completed. *Mahanadi Delta Irrigation Scheme* is being executed as an adjunct to Stage I of the Hirakud Dam Project at an estimated cost of Rs. 34.34 crores. On completion, it will irrigate a gross area of 16.08 lakh acres of land.

Stage II—Of the Hirakud Dam Project comprising the augmentation of Hirakud Hydro Power House at Burla by installation of two more generating units of 37,500 kw each (units 5 & 6) and construction of Chiplima Power House with 3 generating units of 24,000 kw each was completed and put into service in September, 1963. The estimated cost of the Project is Rs. 1,496 lakhs.

Bhadra Reservoir Project—is a multi-purpose Project. It envisages the construction of a masonry dam 1,445 ft. long, 235 ft. above the deepest foundation and 194 ft. above the river bed with 3,610 ft. long earth embankment across river Bhadra near Lakka-valli village in Mysore State with two canals one on either flank. Right Bank canal is 62 miles long and to irrigate an area of 2,26,769 acres and Left Bank is 50 miles long and to irrigate an area of 17,894 acres. The estimated cost is Rs. 3,193.0 lakhs (irrigation) and Rs. 380.00 lakhs (power).

Kakrapara Project—This Project is the first phase of the development of the Tapti Valley. The weir, 2038 ft. long and 45 ft. high on the rocky river bed near Kakrapara, 50 miles upstream of Surat, was completed in June 1953. The canals are scheduled to be completed shortly. The Project will irrigate 6.45 lakh acres. The scheme was started in 1949. The weir was completed in 1955.

Sone Barrage Project—envisages (1) Construction of a barrage 4,616 ft. long, five mile upstream of the existing anicut at Dehri-on-Sone with two wing canals on either side. The Sone Barrage Bridge is the longest bridge in the world and was completed and opened on 21 st. November, 1965. (2) Remodelling of the existing canal system

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Navgam Project—envisages construction of a diversion dam at Navgam, Broach district, 12 miles from Raj Pipla and a Low Level Canal.

Ukai Project—is a multi-purpose project which envisages the construction of a 236 ft. high dam on the river Tapi near village Ukai in Surat district creating a reservoir of 8,511 million cu. m. capacity.

Pochampad Project—comprises the construction of a masonry dam across Godavari river near Pochampad village in Nirmal taluk, Andhra Pradesh and the excavation of a canal for a length of 70 miles with corresponding branches and tributaries.

Mahi Irrigation and Power Project (Bajaj Sagar Project)—envisages the construction of a 120-ft. high dam across river Mahi below its confluence with Erau river near village Bor-Khera in Rajasthan. A saddle dam about 8 miles upstream of the main dam will be constructed for irrigation supplies. The estimated cost of the Project is Rs. 30.05 crores. The Project will irrigate an area of about 1,09,100 acres and generate 29,000 kw. of power.

Mahi Project—envisages the construction of a pick up weir across the river Mahi with a right bank canal in Gujarat State for irrigating an area of 4.6 lakh acres. Kadana Project, second stage of the Mahi Project, provides for the construction of a dam across Mahi at Kadana. It provides for the construction of a direct canal for irrigating 40,905 acres of land in Panchmahal district. It will generate a continuous power of 6,000 kw. at Kadana.

Mayurakshi Project (Canada Dam)—It is mainly an irrigation scheme, though it provides for the installation of a 400 kw. hydro-electric plant. This scheme is located at Messanjore, 20 miles north-west of Suri, the headquarters of Birbhum district of West Bengal, across the Mayurakshi river. The first stage of the Project was completed in 1951 with the construction of a diversion barrage at Tilpara near Suri, 20 miles below the dam in West Bengal. The Canada or Messanjore Dam is 155 ft. high and 2,170 ft. long; it was completed in 1955. The canals will irrigate 6.5 lakh acres annually.

Kangsabati Project—envisages construction of two independent earthen dams on the Kangsabati river and on the Kumari river (a tributary to Kangsabati river), about a mile upstream of their confluence near Ambikanagar in the Bankura district of West Bengal. The length of the Dam and Dykes is 6.5 miles and maximum height of the Dam above the river bed is 135 ft. Two canals are proposed from the Right and Left Bank Head Regulators to irrigate 8.0 lakh acres of *Kharif* and 1.5 lakh acres of *Rabi* annually. The estimated cost of the Project is Rs. 25.26 crores.

Ramganga Project—This multi-purpose project in Uttar Pradesh has three units :

(1) *Dams and Appurtenant Works*—There will be a 412 ft. high earth and rockfil dam across the river Ramganga and a 252 ft. high

saddle dam across the Ghunnet stream with connected works. There will also be two diversion tunnels of 35 ft. diameter each for diverting the flow of the river during construction period.

(2) *Irrigation and Drainage Works*—These consist of : (a) A 1,795 ft. long weir and (b) Remodelling and extension of irrigation channels.

(3) *Power Generation Works*—provides for a power house on the right bank of the river, at the toe of the main dam having 3 units of 55 mw. each.

Kosi Project—The three-unit Kosi scheme, besides affording protection against floods, will irrigate about 14.05 lakh acres annually in Bihar. It is estimated to cost Rs. 680 million. The main features are : *Unit I*—Hanumantnagar Barrage and Headworks. A barrage is being constructed across the Kosi river about 3 miles above Hanumantnagar in Nepal. *Unit II*—Flood embankments (about 150 miles in length) along both the banks of the river, have already been completed. *Unit III*—comprises the *Eastern Kosi Canal* which will take off from Hanumantnagar Barrage, will have four branches, namely, Murliganj, Jankinagar, Banmankhi and Araria branches.

The barrage built on the Kosi at Bhimnagar at a cost of Rs. 23.63 crore was commissioned on April 24, 1965. Work on the excavation on the *Western Kosi Canal* also began the same day. The canal will cost Rs. 13 crore. The barrage, about 1,150 metres in length, is the longest in the country. Along with the 120 kilometres of embankments on either side of the river, the barrage will check the river from changing its course. It will feed the eastern and western canals, which together will provide irrigation for 26 lakh acres of land in North Bihar and South Nepal. The barrage is a part of the Rs. 54-crore project to benefit Nepal and Bihar. A hydro-electrical power house with a capacity of 20 mw will be built by 1966 and 50 p.c. of the power will be supplied to Nepal. The U. S. A. has given Rs. 36.22 crores as assistance for the Kosi Project.

Nagarjunasagar—This Project, which is a scheme of Andhra Pradesh, comprises the construction of a masonry dam, 302 ft. high, near Nandikonda village (Nalgonda district of Andhra Pradesh) across the river Krishna and two canals, each on either side, to irrigate an area of 6 lakh acres. The Right Bank Canal will be 135 miles long and the Left Bank Canal 108 miles. An area of 20.6 lakh acres will be irrigated by this Project. The reservoir will have a storage capacity of 54.4 lakh acre-feet and its water-spread will be 73.66 sq. miles. The dam will be provided with eight pan-stocks of 14 ft. diameter for the generation of power in the final stage. The total amount of loans sanctioned to Govt. of Andhra Pradesh for this Project since 1955-56 is just over Rs. 77.55 crores.

Tawa Project—This Project in Madhya Pradesh envisages the construction of (1) a dam 5,315 ft. long and about 182 ft. high across the river Tawa, (2) two earthen dykes, 771 ft. and 781 ft. long, (3) a network of canals and distributaries on either side of the river, (4) two power houses with total installed capacity of 42 mw, (5) connected transmission lines. It is estimated to cost Rs. 27.10 crores.

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Bhima Project—The biggest irrigation projects on the Bhima river — a tributary of the Krishna — which is meant to irrigate 450,000 acres and is estimated to cost Rs. 42 crores was approved on February 6, 1965 by the Central Technical Advisory Committee.

Ittiadoh Project—on the Garhvi river, a tributary of the Vain-ganga, in the Vidarbha region of Maharashtra, was also approved on February 6, 1965 by the Central Technical Advisory Committee. This Project is estimated to cost Rs. 7 crores and is meant to irrigate 75,000 acres.

Port of Calcutta Project—The alarming deterioration of the river Hooghly and the consequent threat of the extinction of the Port of Calcutta have necessitated the Ganga Barrage Project, which envisages—

- (1) a barrage across the Ganga at Farakka (See *Index*).
- (2) a barrage across the Bhagirathi at Jangipur (Murshidabad) about the outfall of the canal.
- (3) a feeder canal $26\frac{1}{2}$ mile long, taking off from upstream of the Ganga Barrage on the right bank and outfalling into the Bhagirathi downstream of the Jangipur Barrage. The principal objective of the Project is the preservation of the Hooghly-Bhagirathi and the Port of Calcutta, but a number of incidental benefits will also accrue, namely, improvement of the city water supply and the drainage of the region, improvement in communications, inland navigation, etc. The Project is expected to cost Rs. 68.59 crores and will be completed in 8 years.

Matatila Dam—The Project provides for the construction of a dam on river Betwa 35 miles south-west of Jhansi town, Uttar Pradesh. It will provide irrigation facilities to an area of 4,09,582 acres annually in Uttar Pradesh and Madhya Pradesh through a distribution system of 768 miles. Three generating units of 10 mw. each are under installation.

Kundah Hydro-Electric Project—is the biggest scheme so far undertaken in Madras State. It is situated in the Nilgiris. It comprises four stages. First and second stages now functioning include 2 power houses, the third and fourth stages comprise 3rd and 4th power houses. The Project is being built with aid from the Canadian Government under the Colombo Plan.

Rajasthan Canal Project—This Project envisages the construction of a canal taking off from the Harike Barrage across the river Sutlej and has been divided into two parts: (1) *Rajasthan Feeder*: 134 mile long, of which the first 110 miles lie in Punjab; (2) *Rajasthan Canal*: 291 mile long, lying entirely in Rajasthan. The Rajasthan Canal Project on completion of both the phases will provide irrigation facilities to an area of 28.75 lakh acres annually. Works in the first and second stage of the Project are estimated to cost Rs. 75 crores and Rs. 64 crores respectively.

Upper Krishna Project—consists of a masonry spillway dam with earthen flangs across Krishna river at Narayanpur in Gulbarga district of Mysore. The dam is 127.5 ft. high above the river-bed

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh level and is 34,200 ft. long. Two canals take off from the dam. The Project will irrigate an area of 6 lakh acres. The estimated cost of the project is Rs. 58.2 crores.

MAJOR IRRIGATION WORKS

Andhra Pradesh—Romperu drainage (1956); Godavari delta system (1890); Nizam Sagar (1931); Rallapad (1957); Upper Penner (1958); K. C. Canal (1958); Godavari Barrage (1959-60); Bhairvani Tippa Stage I (1958-59); Prakasham (1960).

Bihar—South Canals (1874); Kamala Canal (1951); Mayurakshi Left Bank Canal (1958); Tribeni Canal extension (1958-59); Nagi Dam (1960-61).

Gujarat—Rangola (1952); Brahmani (1954); Moj (1955); Aji (1957-58); Machhu I (1962-63).

Jammu & Kashmir—Sind Valley (1956).

Maharashtra—Nira Left Bank Canal (1906); Pravara River Works (1911); Nira Right Bank Canal (1938); Gangapur Reservoir (1959).

Mysore—Krishnarajasagar Canal (1930); Tunga Anicut (1958-59); Nagu (1958-59); Ghataprabha Left Bank Canal (1958-59).

Orissa—Rushi-Kulya Canal (1895).

Punjab—Western Jamuna Canal (1886); Upper Bari Doab Canal (1886-87); Sirhind Canal (1886-87); Eastern Canal extension (1933); Nangal Barrage (1954); Western Jamuna Canal extension (1944-45); Dadri (1961).

Kerala—Kuttanad (1956); Peechi (1957-58); Nayyar (1959-60); Malampuzha (1959-60); Walayar Reservoir (1958-59); Chalakudy, Stage I (1957-58); Wadakkancheri (1958-59).

Madhya Pradesh—Tandula Canals (1925); Mahanadi Canals (1927); Sampna (1959); Gangulpara (1960-61).

Madras—Perinchari (1956); Periyar System (1897); Kavari Mettur (1934); Lower Bhavani (1956); Araniar Reservoir (1957); Mettur Canals (1957); Krishnagiri (1958); Sathanur (1959); Amravathy (1959); Kattalai High Level Canal Scheme (1959); Pullambadi Canal Scheme (1959).

Rajasthan—Jawai Project (1958-59); Prabati Project (1959-60); Meja Project (1960-61); Sareri (1961); Namona (1961).

Uttar Pradesh—Ganga Canal (1891); Agra Canal remodelling (1961); Lower Ganga Canal (1891); Sarda Canal extension (1955-56); Sarda Canal (1930); Mata Tila, Stage I (1957-58); Sarda Canal Reservoir (1960-61); Betwa Canal (1893); Jirga Reservoir (1960); Belan & Tons Canal (1960); Ban-Ganga Canal (1961); Gavai & Ghagar Canal (1918).

West Bengal—Damodar Canal (1935); Mayurakshi (1956-57).

POWER GENERATION

POWER GENERATION IN INDIA—Generation of power is essential for the industrial development in India, because the economic prosperity of the country mainly depends upon it. In this respect, compared with progressive countries, India lags far behind. Electricity supplies only a small proportion of the energy consumption of India. The installed capacity of power plants in the public utilities in March 1962 was 50,16,883 kw—an increase of nearly 174 p.c. since 1951. During the same period, the generation of electricity increased from 58,619 lakh kwh. to 1,96,699 lakh kwh. showing an increase of nearly 236 p.c. Nearly 7 out of 10 units of electricity are sold to industries, only one to households for domestic use and the remaining two meet the needs of commercial buildings, public lighting, traction and water works. The generation of electricity in India has risen from 18 kwh. per head of the population in 1951 to 45 kwh. in 1961. The Third Plan target is 95 kwh.

Power potential studies of the river basins of India indicate an aggregate hydro-electric potential of the order of 4-crore kw at 60 per cent load factor, such as—

- (1) West-flowing rivers of the Western Ghats—43 lakh kw ;
- (2) East-flowing rivers of southern India—86 lakh kw ; (3) Central Indian rivers—43 lakh kw ; (4) Ganga basin—48 lakh kw ;
- (5) Brahmaputra, Manipur and Tyao—1,25 lakh kw ; (2) Indus—66 lakh kw ; Total—411 lakh kw.

The *pattern of power development* in India is at present as follows—(1) Mysore Kerala, Punjab, Orissa, Jammu and Kashmir—mainly hydro, (2) Bihar, West Bengal, Gujarat and Rajasthan—mainly thermal, (3) Maharashtra, Madras, Andhra Pradesh, Uttar Pradesh, Assam and Madhya Pradesh—partly thermal and partly hydro.

ORGANISATION FOR POWER DEVELOPMENT—Electricity supply in India began with the passing of Indian Electricity Act of 1910. The Electricity (Supply) Act was passed in 1948 to ensure rapid and orderly generation of electricity. It provides for the setting up of a *Central Electricity Authority* for the whole country and *State Electricity Boards* for regions. The Central Electricity Authority was constituted in 1950 and the State Electricity Boards have been set up in almost all the States.

Central Electricity Authority was set up under S. 3 of the Electricity (Supply) Act of 1948 to perform the following functions—(1) to develop a sound, adequate and uniform national power policy ; (2) to act as arbitrators in matters of dispute arising between the State Government and the Board and a licensee or other person as permitted under the Act ; (3) to carry out investigations and collect and record data concerning the generation, distribution and utilization of power and development of power resources ; (4) to publish information secured under the Act and to provide for publication of reports and investigations ; (5) to give decisions on

applications in respect of the investments in depreciation or other reserves outside the business of electricity supply; (6) to scrutinize and make recommendation on schemes of the State Electricity Boards costing more than Rs. one crore each.

State Electricity Boards—have been formed in almost all the States of India. These Boards are required to rationalise the production and supply of electricity in their respective areas, to give bulk supplies of power to existing licensed undertakings and retail power wherever necessary and direct licensees to achieve maximum economy and efficiency in the operation of their undertakings.

Regional Electricity Boards—have been formed into the following 5 regions to advise in the matter of integrated operation of power systems within its jurisdiction : Northern, Southern, Eastern, Western, and North-Eastern.

Central Board of Irrigation and Power—This Board continues to function as a central co-ordinating authority for research work in the field of hydraulic and hydro-electric engineering. It is an autonomous body. There are many research stations guided by the Board. The Board has also a Research Committee attached to it to co-ordinate research on irrigation, hydro-electric and allied subjects.

NUCLEAR PROJECT—Nuclear power is expected to play a progressively increasing part in meeting energy demands in future years. A nuclear power station is being built at Tarapore near Bombay. It will consist of two reactors, each producing 190 mw of power. It is proposed to instal a 200 mw second atomic power station near Rana Pratap Sagar Dam in Rajasthan (See *Atomic Energy* Section).

OWNERSHIP—Until 1925 the development of electricity was confined mainly to private companies since there was a gradual change. In March, 1963 private companies owned 75 p.c. of the public utility undertakings and 25.5 p.c. of the total installed capacity. Upto March, 1963 ownership—public utility installations—were as follows :

Ownership	Number of undertakings (reckoned on the basis of ownership)	
State Governments or State Electricity Boards	..	20
Power Corporations		1
Municipalities		58
Private Companies		238

ELECTRICITY DEVELOPMENT IN INDIA—Broadly speaking, most of the electrical developments in India have so far been limited to satisfying the demand of urban areas. This has led to a lopsided development of our economy. It may be pointed out that six large cities—Bombay, Calcutta, Ahmedabad, Kanpur, Madras and Delhi, account for 30 per cent of the country's installed capacity and 30 p.c. of the generated energy.

Madras now ranks first in the Rural Electrification of 18,646 towns and villages in the State; as many as 10,500 or 58 p.c. had been electrified at the end of the Second Plan.

CENTRAL WATER AND POWER COMMISSION—See *Index*

POWER RESEARCH—The Power Research Institute has been established at Bangalore for providing facilities for research and investigation in the field of electric power generation and supply and for the manufacture of electrical equipment. The Institute will have two divisions, one at Bangalore for undertaking research on problems connected with general electrical engineering and high voltage techniques and the other at Bhopal for switchgear testing and development. Financial assistance for the project was secured from U. N. Special Fund. There are two technical Centres at Kohat and at Nagarjunasagar.

TOWNS AND VILLAGES ELECTRIFICATION

Population range	Total number (1951 Census)	No. electrified by March 31			
		1951	1956	1961	1962
Over 1,00,000	73	49	73	73	73
50,000 to 1,00,000	111	88	111	111	111
10,000 to 50,000	1,257	500	716	1,099	1,110
Below 10,000	5,59,665	3,050	6,500	22,686	25,889
Total	5,61,106	3,687	7,400	23,969	27,183

HYDRO-ELECTRIC AND THERMAL PROJECTS

Kotahgudam Thermal Power Station—It is proposed to instal a thermal power station at Kotahgudam coal mines region in the Telengana area of Andhra Pradesh. The first and second stages of this project is estimated to cost Rs. 23.34 crores and Rs. 10.77 crores respectively.

Delhi Electricity Supply Undertaking—was completed during September, 1963. The total available power is 161 mw.

Dhuvaran Thermal Station—is located on the bank of the river Mahi at Dhuvaran in the Khaira district of Gujarat State. The first stage of the Project envisages installation of four generating units of 62.5 mw each. The revised estimated cost of the Project is Rs. 30 crores. The second stage of the scheme provides for the installation of two additional units of 125/140 mw and is estimated to cost Rs. 22.76 crores for generation and Rs. 3.3 crores for transmission.

Delhi Thermal Project—Three units of 50-62.5 mw each are being installed at an estimated cost of Rs. 1,613 lakhs. A barrage across Jamuna is proposed to be constructed at an estimated cost of Rs. 3.02 crores.

Ramagundam Thermal Power Station—is situated in the Telengana region and has an installed capacity of 37.5 mw comprising three 12.5 mw. units. The power station was commissioned during 1957. However, owing to rapid growth of demand for power in this region, the extension of Ramagundam Power Station by a 62.5 mw generating unit was sanctioned under the Third Plan at an estimated cost of Rs. 4.86 crores.

Upper Sileru H.E. Project—The project which utilises the tail waters of the Machkund Power Station, comprises the construction of a diversion weir about 35 ft. high across the Sileru river in Andhra Pradesh, and a water conductor system to convey water to the power station which will house two units of 60 mw each initially. The Project is estimated to cost Rs. 13.30 crores.

Pamba-Kakki Hydro-Electric Project—envisages tapping of the potential of the Pambi Valley in the Kerala State. The scheme is estimated to cost Rs. 32.80 crores.

Idikki Hydro-Electric Project—envisages development of the hydro-electric resources of the Upper Periyar Valley and is the biggest project in Kerala. The scheme envisages installation of five units of 100 mw each. The estimated cost of the scheme is Rs. 49.22 crores.

Kundah Hydro-Electric Project—The first two stages of the Project with an installed capacity of 180 mw. have already been completed. The third stage of the Project has already begun. It is being financed by Canada. Stage III provides for the installation of a third generating unit of 20 mw in the existing Power House No. I and fifth unit of 35 mw in Power House No. II and one unit of 20 mw, two units of 60 mw each and one unit of 50 mw in three more power stations. The revised estimated cost the Project is Rs. 30 crores.

Mettur Tunnel Project—provides for utilisation of the discharge of 20,000 cusecs from the existing Mettur reservoir by installing 4 units at the site of the existing Mettur Dam. The Project with the installation of four generating units of 50 mw is estimated to cost Rs. 13.32 crores.

Neyveli Thermal Power Project—The Project has been under erection since 1961 at Neyveli in South Arcot district about 140 miles from the Madras city. The Russians have erected the six units of 50 mw each of this thermal station in the first stage. With another 100 mw unit, the generating capacity of the station will reach 400 mw at end of the Third Plan. Till the end of December, 1964, the station generated 2.259 million units.

Koyna Hydro-Electric Project—was designed to be completed in three stages. The four units of stage I of the Project has been commissioned and handed over to the State Electricity Board of Maharashtra.

Sharavati Valley Development—comprises construction of a storage dam in Mysore 184 ft. high above the river bed and 6,860 ft. long. This will cost Rs. 85 crores. The first of ten generators of 89.1 mw of the Sharavati power project has been commissioned. It produces 90 mw of power which is being supplied to Bangalore. Another generator of 90 mw capacity will be ready shortly.

Balimela Project—on the Sileru river. It envisages utilisation of the tail waters of the existing Machkund power station in Orissa.

Obra Hydro-electric Project—envisages utilisation of the tailrace waters from Rihand power station over a drop of 68 ft. of the Rihand river downstream of the Rihand Dam power station. The provision is for Rs. 11.5 crores.

Obra Thermal Power Station—with five generating units of 50 mw each. The estimated cost of the project is Rs. 27.25 crores.

Rihand Project—envisages the construction of a concrete gravity dam across the river Rihand near Pipri village in the Mirzapur district of U.P. The dam is 1,021.3 yards long and 102 yards high above the river-bed. The power house is designed to house six generating units of 50 mw each. 5 of these units are in operation.

Bandel Thermal Power Station—is located near Bandel about 35 miles north of Calcutta close to the river Hooghly by the side of Bandel-Baharwa railway line. The station will comprise 4 units of 75-88.5 mw each. It will cost Rs. 32.27 crores.

Trisuli Project—comprises the construction of a diversion weir across the Trisuli river, water conductor system and a power station with three generating units of 3 mw each. This weir is already in advanced stage of construction. This is in Nepal for urban areas only. Most of the power supply undertakings used to cater large power systems. Now they serve the needs of rural areas also. Foreign exchange is being paid by the Nepal Govt., but equivalent amount in rupees against it is paid to the Government of Nepal by the Government of India.

Naharkatiya Thermal Project—The scheme which envisages utilisation of natural gas available from the Naharkatiya oil-fields involves installation of 3×23 mw Gas Turbine Sets at Namrup in Assam. The scheme is estimated to cost Rs. 12.17 crores including transmission works.

Umiam Hydro-electric Project—Stage I : involves construction of a 210 ft. high dam on Umiam river in Assam and installation of four generating units 9 mw each. The revised estimate of the scheme has gone up to Rs. 14.14 crores. Stage II : envisages installation of 2×9 mw units at Umiam and an additional unit of 2.8 mw at Umtru Power House.

Lower Jhelum H. E. Project—is located in Baramulla district on river Jhelum. In the first stage, four units of 16 mw each will be installed and three more units of the same capacity will be added later. The estimated cost of the scheme is Rs. 17.45 crores for 112 mw installation.

Korba Thermal Power Station : Stage II—The Project envisages the installation of four additional units of 50 mw each in the existing Korba Power House near Chamba in Bilaspur district of U.P. The revised estimated cost of the scheme is Rs. 26.46 crores.

Amarkantak Thermal Power Station—scheme involves installation of two units of 30 mw each. The estimated cost of the Project is Rs. 10.63 crores. The power station is completed and both the generating units have been commissioned in January, 1965.

Badarpur Thermal Power Station—The first stage consists of the installation of 3×150 mw units with a provision for extension up to 4×150 mw. It is estimated to cost Rs. 45.34 crores.

Machkund Project—This hydro-electric project is a joint venture of the Governments of Andhra and Orissa.

Srisaigram Project—The Project envisages the construction of :

(i) a dam across Krishna river near the famous Srisaillam shrine, 385 ft. high above bed level and 1,685 ft. long to impound the waters of the river; (ii) a power house at the toe of the dam to accommodate ultimately seven units of 110 mw each; (iii) transmission lines and sub-stations. The Project is estimated to cost Rs. 45.75 crores and includes Rs. 7.28 crores for transmission.

Barauni Thermal Power Station—The first stage of the Barauni Thermal Power Station with two sets of 15 mw each at the cost of Rs. 3.09 crores has been commissioned. In the second stage, to increase the firm capacity of the power station to 30 mw to meet the demand of the oil refinery, a third unit of 15 mw and two more units of 50 mw are being added to meet the urgent load demands in North Bihar. The estimated cost of Stage II is Rs. 10.50 crores.

Pathratu Thermal Power Station—is to cost Rs. 46.97 crores for supplying power to the Heavy Engineering Corporation at Hatia in Hazaribagh district. The Project provides for installation of four generating units of 50 mw each and two units of 100 mw each.

Satmura Thermal Power Station—is a joint project of Rajasthan and Madhya Pradesh. Five generating units each of 50/625 mw capacity will be installed in the power station. The revised estimated cost of the Project is Rs. 38.22 crores.

Talcher Thermal Station—envisages the construction of a thermal power station with an installed capacity of 250 mw (4 generating units of 62.5 mw each). The revised estimated cost of the Project is Rs. 30.35 crores.

Bhakra Right Bank Power Station—utilises the power potential available at Bhakra Dam.

Yamuna Hydel Scheme—proposes to harness the river Yamuna and its tributary Tons in 2 stages. The first stage envisages construction of a barrage at Dakpathar, 2 miles downstream of the confluence of Yamuna and Tons, for diverting the water into a power channel on which two power stations will be constructed with an installation of 3 units of 11,250 kw each (at Dhakrani) and 3 units of 17000 kw each (at Dhalipur). The second stage envisages the construction of a diversion dam near village Inchari, utilising this water in power house I at Chibro with an installation of four units of 57 mw each and further utilisation of the tail race water from power house I in the power house II at Khodri with an installation of four units of 24 mw each.

A POWER GLOSSARY

Hydro-Electric Power is generated by utilising the energy in water. A heavy flow of water is passed through the turbine to generate power. The water is brought to the turbine through large pipes called 'penstock'.

Thermal Power is generated by using the energy in steam which is passed through the turbine. Generally low-grade coal is used to heat water in boiler and convert it into steam.

Turbine and Generator are the two most important components in every power station. Turbine is set in motion by the pressure of

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 water (as in hydro-electric station), or by steam (as in thermal station) or by diesel engine. The revolving turbine, in turn, moves the generator with which it is connected by a long rod called 'shaft'.

Generator is, in a sense, misnomer because it does not actually generate electricity but only converts the energy it receives from the turbine into electric power.

Installed Capacity is the total of the generating capacity of the generators installed in a power station.

Load is the drawal of electric current from the generator by the consumers. When power is being consumed at any place, it is drawn directly from the generator which, accordingly, produces as much power as is being drawn from it.

Ampere is a unit of measuring the flow of electric current.

Volt is a unit of measuring the difference between the electric potentials of the two points at which the electric current flows. The difference is determined by the pressure of the current and the resistance it receives from the conductor. The higher the voltage, the greater is the capacity to discharge electric current.

KV means thousand (kilo) volts. One thousand kilovolts make a megavolt (MV).

KVA means kilo-volt-amperes.

KW means kilowatt. Watt is a unit of electricity. It is derived by the multiplication of voltage by current amperes. One thousand (kilo) watts make a *kilowatt* and one thousand kilowatts make a *megawatt*. If you burn a 50-watt electric lamp for 20 hours, you will be using up a Kw.

Transformer is a contrivance, consisting of coils, which steps up or down the voltage at which the electric current is to be carried.

Insulator is made of material like china clay or wood which is non-conductor of electricity. It is used wherever electric current is not expected to pass.

Grid is a system by which power supply from different generating plants is combined to distribute it to consumers more economically and conveniently.

Switchgear controls and regulates the flow of electric current.

Circuit Breaker is a contrivance used for breaking and making the flow of electric current which moves in a circuit from the generating unit to the consuming unit and back. It is a part of switchgear.

AGRICULTURE

IMPORTANCE OF INDIAN AGRICULTURE—India is one of the leading agricultural countries in the world and one of the biggest sources of its wealth is its produce from land. 69.5% of the total working force earns its livelihood from agriculture. Agriculture accounted for 46% of the national income in 1963-64. The

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number of cultivators in 1961 was 99.5 millions. Average size of a land holding is 7.5 acres. Irrigated area was 18 p.c. of net sown area. Of the total value of crops (Rs. 60870 million at constant prices), 55 p.c. represented foodgrains in 1963-64.

India ranks first in the world in the production of groundnuts and tea and enjoys a virtual monopoly in the production of lac. It is the second largest producer of rice, jute, raw sugar, rape-seed, sesamum and castor-seed.

The Third Plan provides for an outlay of Rs. 601.56 crores on programmes of agricultural production as against Rs. 206.65 crores in the Second Plan. Nevertheless, India does not produce sufficient food for its own needs.

ADMINISTRATIVE SET-UP—Ministry of Food and Agriculture was set up in April, 1957. At present the *Department of Food* is responsible for the following functions—(a) procurement of foodgrains for civil and military requirements, (b) distribution of imported foodgrains among States, (c) co-ordination, planning and guidance in regard to food policy from an all-India point of view, (d) regulating import and export of foodgrains. The *Department of Agriculture* is responsible for the following broad functions—(a) agricultural production, (b) agricultural research, education and extension, (c) animal husbandry, fisheries and forestry, (d) fruit and vegetable products industry, (e) agricultural economies and statistics, (f) agricultural development, (g) liaison with the Food and Agriculture Organisation of U. N. and other international organisations, (h) procurement and distribution of fertilizers, (i) agricultural marketing, (j) co-operation, (k) land reclamation, (l) agricultural minor irrigation, (m) soil conservation.

LAND UTILISATION—In 1961-62, the latest year for which there are full figures, there were 148 million hectares (367.15 million acres) of land under cultivation in the country.

During 1963-64, an area of 83 million acres was covered under improved seeds of foodgrains. The National Seeds Corporation distributed 600,000 kgs. of hybrid maize seed sufficient to cover an area of one lakh acres.

SOIL OF INDIA—See *Index*.

CROPS—The crops of India are usually classified as follows : (1) *Food crops*, such as rice, wheat, barely, millets, pulses and gram, sugarcane and spices : (2) *Oilseeds*, such as linseed, rape and mustard, sesamum, castor, groundnut, and coconut. (3) *Fibres*, such as cotton, jute, hemp, and flax. (4) *Drug and Beverages*, such as poppy, cinchona, tobacco, tea, and coffee. About three-fourths of the cultivated land is used for food crops, and the rest for cash crops. The main food crops are rice which takes up about 22 p.c. of the cropped area and wheat, with 9 p.c. of the cropped area. The main cash crops are oilseeds, cotton, sugarcane and jute. A little less than 20 p.c. of the area under crops is irrigated, while nearly 80 p.c. of the irrigated area is used for foodgrains.

CROP SEASONS—Digital Preservation Foundation, Chennai seasons :

(i) *Kharif* and (ii) *Rabi*. The *kharif* crop is harvested from Nov. 1 to Oct. 31 and *rabi* crop from May 1 to April 30. The major *kharif*, crops include rice, jawar, bajra, maize, cotton, sugarcane, sesamum and groundnut. The major *rabi* crops are wheat, barley, gram, linseed, rape, and mustard.

The seasons for principal crops are as follows : *Wheat*—Nov. to Oct. ; *Sugarcane*—Nov. to Oct. ; *Cotton*—Sept. to August ; *Jute*—July to June ; *Tea*—Jan. to Dec. ; *Coffee*—July to June.

YIELD OF CROPS—India's yields per acre are low. In 1963-64, an acre of land yielded 917 lb. of Rice. 651 lb. Wheat, 453. lb. of Jowar 308 lb of Bajra, and 503 lb of Jute. The yield of Groundnut is 694 lb. per acre, of Cotton 110 lb. and of Sugarcane (raw sugar) 4132 lb.

AGRICULTURAL RESEARCH AND EDUCATION—Agricultural research, animal husbandry and forestry are carried on by The Indian Council of Agricultural Research, Central Research Institutes and Commodity Committees.

The Indian Council of Agricultural Research, set up in 1929, promotes, guides and co-ordinates agricultural research in the country. The Council does not possess any research institution of its own, but sponsors agricultural research in Central and State research institutions, universities and recognised private institutions. The finances of the ICAR are obtained from Government grants, contributions from other sources and the income from a cess of half p.c. on the exports of certain agricultural products.

Institutes—India's largest agricultural research institute is the Indian Agricultural Research Institute, established on April 1, 1905 at Pusa, now at New Delhi. The Institute has been accorded the status of a university. It conducts fundamental and applied research and imparts postgraduate training. *Central Rice Research Institute*, Cuttack, carries on fundamental and applied research and imparts training to post-graduate students for the improvement of rice products. *Central Potato Research Institute*, Simla, is engaged in evolving improved varieties of potatoes. *The Central Vegetable Breeding Station* at Kulu has been experimenting on the adoption of European vegetables for Indian conditions. *Indian Institute of Sugar Technology* at Kanpur, established in 1936, conducts research in different branches of sugar technology. *Indian Institute of Sugarcane Research*, established in 1922 at Lucknow, is now an Institution from Jan. 1, 1954. *Sugarcane Breeding Institute*, Coimbatore and its sub-station at Karnal carry on valuable investigations. *The Forest Research Institute* at Dehra Dun, opened in 1914, is engaged in research on silviculture, forest botany, entomology, the seasoning, preservation and the technology of wood, timber mechanics, and cellulose and paper-pulp chemistry and on minor forest products. There is another *Forest College* at Coimbatore for the training of forest officers. *The Indian Veterinary Research Institute* at Izatnagar and Mukteswar, established in 1890, carry on activities pertaining to research, teaching, manufacture of veterinary biological products and advisory

work. *The National Dairy Research Institute* at Bangalore trains students for diploma course in dairying and conducts research on dairy problems. A *National Dairy Research InsInstitute* at Karnal has been started to carry on research work on the quality of milk. It has a Dairy Science College. Another important research station is the *Indian Lac Research Institute* at Namkum (Ranchi), which is engaged in research on lac. Regarding fishery research, the three important stations are *The Central Inland Fisheries Station*, Calcutta, *Central Marine Research Station*, Mandapam and *Deep-Sea Fishing Station*, Bombay, where inland, marine and deep-sea researches are being carried on. *The Central Fisheries Technological Research Station*, Cochin, initiates research on fishing gear and craft and fishing method. *The Deep-Sea Fishing Station* at Bombay continues exploratory fishing operations. *The Offshore Stations* at Cochin, Tuticorin and Visakhapatnam continue their activities satisfactorily. The U. P. Government started the *Agricultural University* at Rudrapur in 1960.

Commodity Committees—operate and subsidize a number of research schemes at various research stations and sub-stations. These Committees are financed by a cess levied on the particular commodity.

(1) *Indian Central Cotton Committee* at Matunga, Bombay.

(2) *Indian Central Jute Committee* continues to improve the yield and quality of jute by evolving new varieties and improving the culture and setting techniques.

(3) *Indian Central Oilseeds Committee* continues schemes for agricultural and technological researches, marketing and development of village oil industries.

(4) *Indian Central Sugarcane Committee* maintains Indian Institute of Sugar Technology at Kanpur. The other two Institutes are *Indian Institute of Sugarcane Research*, Lucknow and *Sugarcane Breeding Institute*, Coimbatore.

(5) *Indian Central Coconut Committee* has research stations at Kasaragad and Kayangulam.

(6) *Indian Central Arecanut Committee* has a Central Arecanut Research Station at Vital and several regional research stations.

(7) *Indian Central Tobacco Committee* carries on research on various types of tobacco at its Institute at Rajahmundry as well as at its research station and sub-stations.

(8) *Indian Lac Cess Committee*, Namkum (Ranchi) carries on research on lac.

(9) *Indian Central Spices and Cashewnut Committee* was established in 1961 with all aspects of research, development and marketing of spices and cashewnuts.

(10) *All India Cattle Show Committee*, Karnal (Punjab).

AGRICULTURAL DEVELOPMENT PROGRAMMES—The development programmes for food cover two types of schemes—(1) *Work Schemes* and (2) *Supply Schemes*. The *work schemes* include the construction and repair of wells, tanks small dams, channels and tube-wells, the installation of water-lifting appliances, schemes of contour-bunding and the clearance and reclamation of waste lands.

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The supply schemes cover the distribution of fertilizers, organic manures and improved seeds.

Schemes for agricultural development are as follows—*minor irrigation* envisages an outlay of Rs. 250 crores. This will maintain existing irrigation works, carry construction of field channels and look after surveys and irrigations. Tube-wells are being drilled. An extensive ground-water exploration has been undertaken.

Various soil conservation programmes are being carried on. An outlay of Rs. 72 crores has been provided for various soil conservation. Other soil conservation programmes include reclamation of water-logged, saline and alkaline lands. *Contour bunding* and *terracing* are also being carried on, so also *dry farming*. *Afforestation* and other soil conservation measures in catchment areas of river valley projects are being carried on.

For the development and popularization of improved seeds, the *National Seeds Corporation* started functioning during 1963-64 and produced hybrid maize seed over an area of 1,500 acres.

Schemes for the production of *manures* and *fertilizers* are being implemented everywhere. Schemes for the utilization of sewage and sullage are in operation in important towns. For the development of local manurial resources—(1) compost production has been intensified and (2) night soil composting has been taken up. The distribution of green manure seeds and of nitrogenous fertilizers under the *Central Fertilizer Pool* is being extensively carried on. Bone-meal is being manufactured in bone mills. A *Fertilizer Control Order* was issued in 1957 for quality and price control of fertilizer materials. Under an Order of *Essential Commodities Act, 1955*, a ban was imposed on inter-State movement of ammonium sulphate, urea, ammonium nitrate, etc.

As for *Plant Protection* and *Locust Control*, the Directorate of Plant Protection, Quarantine and Storage assists the States and Territories with technical advice, equipment and personnel in controlling crop pests and diseases through its 14 Central Plant Protection Stations.

Intensive Agricultural District Programme for exploiting the production potentialities with maximum irrigation facilities was started during 1961-62 with financial help from the Ford Foundation. This will increase food production and demonstrate most effective ways of increasing food production. The Programme was launched, in the first instance, in 7 selected districts. A *Central mechanised farm*, with an area of about 30,000 acres, was established at Suratgarh in Rajasthan in 1956.

There is a *Tractor Training and Testing Station* at Budni which has trained upto now 775 trainees. A second Tractor Training and Testing Centre has been established at Hissar in Punjab.

The *Agricultural Refinance Corporation* was inaugurated on July 1, 1963. The Corporation is primarily a refinancing agency providing financial accommodation of a long-term nature for those major developmental projects which cannot be financed by the existing credit agencies. The Corporation has an authorised capital of Rs. 25 crores.

The National Seeds Corporation Ltd.—was incorporated in March 1963, with the object of producing, selling and distributing agricultural seeds, establishing the seed farms and introducing seed quality control measures. The Corporation commenced its business in July 1963. The authorised capital of the Corporation is Rs. 5 crores.

A programme for the intensification of rice production in 40 selected districts on "package" basis has been initiated. The "package" approach is also being extended to cotton, oilseeds and other important commercial crops.

INTERNATIONAL RELATIONS AND TECHNICAL ASSISTANCE—The Government of India continue to be represented on practically all important organs of the FAO of U.N. Active co-operation is also maintained with other international organisations. The FAO assigned 38 foreign experts in the fields of dairy, forestry, fisheries, horticulture, livestock and nutrition. India continues to receive technical assistance from the Government of U.S.A. under the *Technical Assistance Programme* for various development schemes. The other assistances are : (1) Technical Assistance under Colombo Plan, (2) *Ad-hoc* Assistance, (3) Technical Assistance provided by India.

International Relations—India continues to maintain mutually technical association with foreign countries and organisations.

Freedom From Hunger campaign is being carried on in all the States. These relate to the establishment of Cattle Feed Mixing Plant, Boat Building Yard, Service Station and Mobile Service Facilities, Improvement of Soil Conservation Measures and Plant Protection Service. The Oxford Committee for Female Relief has provided assistance through F.A.O., amounting to \$ 3,02,500 for the establishment of various schemes.

AGRICULTURAL MARKETING—The agricultural marketing in India is promoted by the *Directorate of Marketing and Inspection*. Their activities are : (1) grading and standardisation of agricultural commodities, (2) regulation of markets and market practices, (3) marketing investigations and surveys, (4) training of agricultural marketing personnel, (5) administration of the *Fruit Products Order, 1955*.

Grading and Standardisation—This is carried out under the *Agricultural Produce (Grading and Marking Act) of 1937*. Export commodities, such as tobacco, sannhemp, wool, bristles, goat hair, lemon-grass oil, palmrosa oil, sandalwood oil, vetiver oil, myrobalans and walnuts are compulsorily graded (AGMARK). Grading of commodities for internal trade is being carried out on a voluntary basis for ghee, oils, butter, cotton, eggs, wheat flour, rice, potatoes, gur, fruits, honey, etc. For fixing and revising grade standards, a *Central Control Laboratory* at Nagpur and 8 regional laboratories at Guntur Madras, Cochin, Kanpur, Rajkot, Amritsar, Calcutta and Bombay have been started under the Third Five-Year Plan. The first three have started functioning ; others have been reequipped.

Regulation of Markets—Continuous attention is being paid to

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increase the number of regulated markets in the country. The total number of regulated markets now stands at 1035.

Training—There are three courses of training personnel in agricultural marketing: (1) one-year course at Nagpur for training superior personnel of the State Marketing Departments, (2) five-month course at Sangli and Hyderabad for the training of marketing secretaries and marketing superintendents, (3) three-month course for training grading supervisors. A new training centre for imparting the five-month course was started in Lucknow during 1963-64.

Fruit Products Order, 1955—Under this Order, enforcement of quality control and rendering advisory guidance for the promotion of industry is being carried on as before.

AGRICULTURAL DIVISIONS—*Division of Horticulture* carries on research on fruits and vegetables. *Entomology Division* devises control schedules for the pests of cotton and brinjal. *Division of Soil Science* conducts investigations on fertilizer values of several phosphates.

FOOD CROPS

Rice—is the leading crop of India and occupies about 30 p.c. of the total cultivated area. In order of merit, Madras, Bihar, W. Bengal, U.P., M.P., Orissa, Assam and Maharashtra are the main rice-growing areas.

Campaign for the popularisation of *Japanese method* of paddy cultivation is being carried on. *Intensive Agricultural District Programme* envisages selection of favourable districts with maximum irrigation facilities and minimum natural hazards.

The production of rice in 1964-65 has been high. The quantity was 38.73 million tonnes. The area under the crop was 36.07 million hectares.

Wheat—is the staple food in the central and northern India and is a winter crop. It stands next only to rice in importance. U.P. and Punjab are the principal wheat-growing areas, supplying about three-quarters of the total outturn in the country.

Barley—is a subsidiary food to wheat-eaters and is grown mainly in U.P. and Bihar. India has now about 7 million acres under barley, producing about 2.4 million tons annually.

Millets—*jowar* (called *cholam* in Madras) and *bajra* are the two main varieties of millets grown in India. While jowar is mainly grown in Maharashtra, Andhra Pradesh, M.P., Madras, U.P., bajra is mainly grown in Rajasthan, Maharashtra, U.P. Madras and Punjab in order of importance. Other such food crop is *ragi*. Another food crop is *maize* (commonly known as *makai* or *bhutta*). It is grown mainly in U.P. and Bihar.

Gram and Pulses—constitute an important and balancing item of the popular diet. *Pulses* form the primary source of protein for the vegetarian population. *Gram* is the most commonly grown pulse in India. *Khesari*, *mung*, *mashur*, *arhar*, *mattar*, and *kalai* also grow extensively throughout the country.

Spices—Though spices constitute only a minor crop, their im-

portance in the foreign trade of the country is considerable. The five important spices—pepper, cashewnuts, cardamom, ginger and turmeric, earn considerable foreign exchange. The west coast, principally Kerala, is the source of *pepper* in India, though it is also grown in small quantities in Mysore, Madras and Maharashtra. India is the largest exporter of *cardamom* in the world. The cardamom plantations are situated in the Western Ghats, south of the Nilgiris and Palghat gap, with the main concentration in the Cardamom Hills of Travancore. A *Cardamom Research Station* has been set up in Kerala. Next to pepper, the most important dollar-earner among spices is *cashewnuts*. India is now the principal source of supply of cashewnuts in the world, accounting for more than 95 p.c. of the world trade. The cashew grows mainly along the coasts, from Kanya Kumari to Bombay on the west coast and upto Berhampur (Ganjam) along the east coast. Kerala is leading in area under this spice and in its production.

Ginger—The important ginger-growing area is Kerala, though it is also grown in other States like U. P. The bulk of the production in India is consumed as green ginger. The conversion of green ginger into dry form for export is concentrated in the west coast region of Kerala.

Turmeric—The principal turmeric-growing areas in India are Andhra and Orissa. To a smaller extent, the crop is also grown in parts of Maharashtra, Madras and Kerala.

PLANTATION CROPS

Tobacco—India stands third in the production of tobacco. Andhra Pradesh is the most important tobacco-producing State, contributing about 40 p.c. of the total production. About 95 p.c. of the country's virginia tobacco come from this State. Maharashtra comes next, followed by Madras, Mysore, Orissa, Madhya Pradesh, Rajasthan and Punjab. Tobacco in India is of two distinct botanical species: *Nicotiana tabacum* and *Nicotiana rustica*. *Nicotiana tabacum* is used for cigarettes, cigars, cheroots, *bidis*, chewing tobacco, snuff, *hookah* and pipe tobacco, while *Nicotiana rustica* is used mainly for *hookah* and chewing tobacco, and snuff. The latter represents only 8 p.c. of the total production of tobacco in the country. Cultivation of *Nicotiana rustica* is mainly confined to upper India, while *Nicotiana tabacum* is grown all over the country.

Tobacco cultivation in India is concentrated in the following zones: (1) *Guntur (A.P.) area* which grows virginia tobacco (white burley and sun-cured virginia); (2) *Charotar (Gujarat) area*; (3) *Nipani area* covering Belgaum in Mysore and Satara district with Kolhapur, Sangli and Miraj in Maharashtra; (4) *North Bihar and Bengal areas*, comprising the districts of Muzaffarpur, Darbhanga and Purnea in Bihar and Jalpaiguri, Malda, Berhampur and W. Dinajpur in West Bengal grow tobacco varieties mostly for *hookah* smoking, chewing and for preparing snuff. They are known locally as *vilayati*, *mathihari* and *jati*; (5) *Uttar Pradesh and Punjab areas*; (6) *South Madras area*, covering Madurai and Coimbatore districts, grows tobacco for chewing, snuff, filter and binder.

The all-India first estimate of tobacco for 1964-65 has put the current year's area under tobacco crop at 973,000 acres.

Poppy—is grown chiefly in U.P. and Central India mainly as Government monopoly.

Tea—India is the largest producer of tea in the world and supplies more than 40 p.c. of the world requirements, with Ceylon and Indonesia trailing behind. India produces many varieties of tea. The tea plantations number more than 8,000. Assam has the highest concentration of plantations (49 p.c. of the total area).

Coffee—is one of the important plantation crops of India. Coffee is grown in India on the sunny slopes of the Western Ghats and its spurs extend eastwards. About 57 p.c. of the areas (2,95,000 acres) under coffee in India are in Mysore State, 22 p.c. in Madras State, 20 p.c. in Kerala State and the remainder scattered in small pockets in various States.

Rubber—is from *latex*, a milky secretion which is found in the tissues of rubber plants. The latex is obtained by tapping the stem. The bulk of acreage is in Kerala with some plantations in Madras and Mysore States also. A *Rubber Research Centre* is to be set up at Tiruvottiyur near Madras.

FIBRES

Cotton—is the chief commercial crop of India. Maharashtra, Punjab, M.P., Madras, U.P., Andhra Pradesh, Rajasthan and Saurashtra are the important cotton-producing tracts in the country.

Jute—After partition, the main producing area of jute is West Bengal. Jute is also produced in certain quantities in Bihar, Orissa and Assam.

Hemp—is another fibre grown in India, chiefly in Madhya Pradesh, U.P., Maharashtra and West Bengal. Small as the production is, it is used largely for the production of cordage and canvass.

Silk—Two-thirds of the total output of this fibre come from Mysore. Of the other varieties of silk, *mulberry* silk is grown in the districts of Murshidabad, Malda and Birbhum of West Bengal, Dehra Dun and Parbargarh of U.P., Gurdaspur of Punjab, and in Kashmir where it is a State monopoly; *tasar* silk in M.P., and in the Chotanagpur district of Bihar, *Eri* or *endi* is a variety of silk from a silkworm which feeds on castor leaves. From the earliest times Assam has been the home of eri silk. Of the four varieties of silk, namely, *mulberry*, *tasar*, *eri* and *muga*, the last two play more important part in the economic life in Assam. The principal rearers of eri silk are the tribal people living in the northern and southern parts of Assam. The most important thing about the *eri* silk is this—*eri cocoons* cannot be reeled but have to be carded and spun more or less like wool and cotton.

OTHER CASH CROPS

Sugarcane—In the sugar map of the world, India occupies a leading place, even exceeding Cuba. Uttar Pradesh and Bihar are the two main producers of sugarcane in India. The average yield of cane per acre is now around 14 tons as compared to 56 tons in Java and 62 tons in Hawaii.

Lac— is a resinous material secreted by insects which live as parasites on certain tropical trees known as lac hosts. The principal lac hosts are *palas*, *ber* and *kusum*. The important producing places of lac are the Chotanagpur district of Bihar, Purulia district of West Bengal and also portions of Maharashtra, Orissa and Assam.

Myrobalan—is a small fruit of the trees in mixed deciduous forests normally below 3,000 feet above sea level, but occasionally found upto 5,000 feet. When pulped, it produces a substance used in tanning industry. It is also used as a country medicine. The fruit is collected in the forests of Madhya Pradesh, Madras, Maharashtra, Bihar and Orissa.

Lemongrass—Oil of lemongrass is an essential oil. It comes from a tall, somewhat stiff and sharp-edged grass growing mostly in Kerala. Lemongrass is used for extracting aromatic chemicals, in perfumery, in the manufacture of soaps and cosmetics and in pharmaceutical preparations. The Kerala Government Lemongrass Research Station was established at Odakali, 14 miles from Ernakulam, on August 27, 1955. More than 80 p.c. of the world's supply of this essential oil is met by India. The major customers are U.K., U.S.A., Soviet Union, Japan, West Germany and the Netherlands.

OILSEEDS

India is one of the largest producers of oilseeds and the principal exporting countries. Oilseeds crops produce oil from seeds either edible or non-edible. The crops may either be perennial, such as coconut, *neem*, *mahua* or annual, like groundnut, gingelly, etc. Groundnut, gingelly, mustard, copra, castor and *kusum* are the most important edible oilseeds. Indian Central Oilseeds Committee Act of 1946 promotes the improvement and development in the cultivation and marketing of oilseeds and oil products. The Central Oilseeds Committee is responsible for the development of all oilseeds, excepting coconut for which a separate Committee has been constituted.

Linseed—is a rabi crop, producing a very important industrial oil. Cultivation of linseed is widespread in India ; main regions being M. P., U.P., Andhra Pradesh, Bihar and Rajasthan.

Castor— is another non-edible oilseed, a virtual monopoly of India. It grows in almost all parts of India.

Groundnut—The following are the important groundnut-producing States: Gujarat, Andhra Pradesh, Maharashtra, Mysore, Madras and Madhya Pradesh. Groundnut, consumed directly or in the form of oil, is one of the important sources of supply of fat in the Indian diet.

Groundnut is primarily used as a source of edible oil. On a large scale, the oil is refined and hydrogenated to get colourless and odourless products for use in culinary preparations. Unrefined groundnut oil is used in the manufacture of soaps and glycerine. The cake left over after the extraction of oil is used either as cattle feed or as a fertilizer.

Rape and Mustard—are two other very important edible oilseeds. Uttar Pradesh grows well over half the rape and mustard in

India. Other important producing areas are Bihar, Punjab, Assam and Rajasthan.

Sesamum—or gingelly (commonly known as *til*) is also an edible oilseed. The chief growers of sesamum are U.P. and Madras followed by Rajasthan, Hyderabad and Madhya Pradesh.

The all-India final estimate of sesamum, in 1964-65 puts the current year's area and production at 2,503,100 hectares (6,185,000 acres).

Coconut—is an important oil-yielding tropical fruit. The kernel of the ripe nut in its raw state finds wide use in culinary preparations or is dried and converted into copra and crushed for oil. Coconut oil is greatly in demand for edible purposes as well as in the manufacture of soaps and in toilet preparations. The tender nut gives a refreshing drink, while the unopened shell on tapping yields a sweet juice or *neera*. Its leaves and timber are extensively used for constructing houses. The bulk of this produce comes from the plantations on the west coast of India, extending from the Konkan in the north to Cape Comorin in the south. The districts of Tanjore in Madras and Godavari in Andhra, Mysore, Orissa and West Bengal also possess appreciable area under this crop.

Cotton-seed—also an edible oilseed, is naturally a by-product of cotton cultivation and is extensively grown in India.

AREA UNDER PRINCIPAL CROPS, 1963-64

(In million acres)			
Rice	..	87.7	Sugarcane .. 5.5
Wheat	..	32.9	Oilseeds .. 36.0
Other cereals	..	107.0	Cotton .. 19.6
Pulses	..	58.7	Jute .. 2.1
Foodgrains	..	286.3	

AGRICULTURAL OUTPUT

Agricultural production during 1963-64 registered an increase of 2.4 per cent compared to the previous year; this moderate rise was due to a sizable drop caused by adverse weather conditions in the output of rabi crops. The index number of overall agricultural production during 1963-64 rose to 140.5 against the corresponding index of 137.2 in 1962-63. The total production of foodgrains in 1963-64 was 79.4 million tonnes being higher by about 1.0 million tonnes compared to 1962-63. The production of rice increased by 4.6 million tonnes, touching a high level of 36.5 million tonnes during 1963-64. Amongst commercial crops, the production of groundnut touched a new record of 5.3 million tonnes during 1963-64. The table below gives comparative figures of production of major crops during last three years :

three years :		(In million acres)			
			1963-64†	1962-63*	1961-62*
Rice	..	Tonnes	36.5	31.9	34.8
Wheat	..	"	9.7	10.8	12.0
Other cereals	..	"	23.3	24.3	22.6
Pulses (including Gram)	..	"	9.9	11.4	11.6
Total Foodgrains			79.4	78.4	81.0

Groundnut ..	Tonnes	5.3	4.8	4.7
Other major oilseeds	"	1.8	2.3	2.3
Total Oilseeds ..	"	7.1	7.1	7.0
Sugarcane (in terms of <i>gur</i>)	"	10.3	9.5	10.1
Cotton (Lint) Bales of 180 kgs. each	"	5.4	5.3	4.5
Jute ..	"	6.0	5.4	6.4

†Final estimates, subject to revision.

*Partially revised estimates, subject to revision.

FOOD

Department of Food—This Department is under the Ministry of Food and Agriculture under a Minister-in-charge.

The year 1963 witnessed some stresses and strains on country's food economy, following a fall in the production of two major cereals—rice and wheat, caused by adverse weather condition. With the fall in production, it was inevitable that there would be some pressure on prices.

There had been some fluctuation in prices regarding the low production of foodgrains in 1962-63. The greatest fall of prices was in the case of rice. The prices of rice began to rise from mid-March, 1963 and went up continuously when the index reached the peak of 133.1. The most difficult rice-price situation during 1963 prevailed in West Bengal which Government tried to minimise by export of rice from Andhra Pradesh, Nepal, etc. The Government of West have lately imposed control on paddy and rice-prices.

The all-India index number of whole-sale prices of cereals (base 1952-53=100) rose from 118 in December 1963 to the peak level of 150 in September 1964.

The all-India index number of whole-sale price of rice stood at 146 in September 1964 (base 1952-53=100).

The prices of wheat remain stable for the major part of 1963. The index of wheat prices which was 90.2 in August, 1963 rose to 97.4 in November, 1963 and 106 in December, 1963.

Each year India's population goes up by 10,000,000. To feed this increase, India requires 2,000,000 tons of additional foodgrains.

Internal Purchases—The purchases of rice by the Central Government in 1962-63 from some States totalled 4.64 lakh tonnes as against 3.00 lakh tonnes in 1961-62.

The procurement price of rice in 1963-64 was increased by Rs. 2.68 P. per quintal.

Formulation of Farm Schemes—The Union Ministry of Food and Agriculture has constituted a 22-member panel of progressive agriculturists to advise the Agricultural Production Board at the Centre in the formulation and implementation of agricultural production plans.

The Union Agriculture and Fisheries Commission, Chairman of the panel. Twenty members of the panel have been co-opted on the advice of State Governments. Two more will be added later.

The panel will meet in New Delhi from time to time to help in the formulation of production programmes on practical lines. It will also review the progress of the programmes periodically and suggest ways and means of remedying any shortfall. The setting up of the panel of farmers in the formulation of agricultural policy is in furtherance of a scheme initiated by the Union Government to give them status in society as a social incentive for higher production.

Under the scheme, selected progressive farmers are to be associated with the Agricultural Production Board at the Centre and the Agricultural Production Committees at Panchayat, block, district and State levels. The farmers selected by the State Governments will be members of the committees for a period of two years and will retire in rotation to be replaced by new members. State Governments have been asked by the Ministry of Food and Agriculture to speed up the setting up of panels of farmers at State level also. Other social incentives to farmers under the scheme include Republic Day awards for outstanding contribution in the field of agriculture, horticulture or animal husbandry, invitation by the President and the Prime Minister at the Centre and by Governors and the Chief Ministers in the States on the occasion of Farmers' Day and publication of brochures highlighting the achievements of outstanding farmers.

Food Board—The names of 11 Directors of the Board are : Mr. T. A. Pai (*Chairman*), Mr. C. Narasimhan (*Managing Director*), Mr. Kishan Chand, Director-General of Food, Mr. B. N. Adarkar, Additional Secretary, Union Ministry of Finance, Mr. N. R. Chatterjee, Joint Secretary, Union Ministry of Community Development and Co-operation, Mr. C. S. Ramachandran, Chairman, Central Warehousing Corporation, Prof. D. R. Gadgil, Mr. P. L. Tandon, Mr. B. K. Shah, Mr. Satwant Singh and Mr. T. A. Verghese, Chief Secretary to the Government of Madras.

FOOD POSITION IN STATES

U. P. faces at present a food deficit of 13 lakh tonnes. The figure is based on the Food Ministry's estimates of last year's (1964) cereal production (149 lakh tonnes) and this year's (1965) cereal consumption (162 lakh tonnes) in the State.

The food situation in the normally surplus Madhya Pradesh is abnormally uneasy. Last crop year, this State had just enough for its needs with also a small surplus. It gave to the deficit States 4 lakh tons of rice, but had to get 1 lakh ton of imported wheat. The following are the official figures for the last crop year : Rice—35 lakh tons, Wheat—19 lakh tons, Jowar—17.27 lakh tons, Maize—5.5 lakh tons, Gram—7.85 lakh tons, Bajra—1.4 lakh tons.

The Bihar Government's Paddy and Rice Procurement (Levy) Order of 1965, now in full operation in the countryside, for building up a buffer stock of 2 lakh tons has spotlighted the gap between agricultural produce and consumption. Bihar is always a deficit State.

IMPORT—The total quantity of foodgrains imported into India

in 1964 amounted to 62.7 lakh tonnes, valued approximately at Rs. 266.25 crores as against 45.6 lakh tonnes, valued at Rs. 183.6 crores in 1963.

Bank Credit on Foodgrains—On the 8th February, 1964, the Reserve Bank issued a directive whereby restrictions on advances against rice and paddy were tightened.

Storage Accommodation—During 1964, an additional storage capacity of 0.89 lakh tonnes was constructed, raising the total capacity owned by the Government of India from 17.68 lakh tonnes on the 1st January, 1964 to 18.57 lakh tonnes on the 31st December, 1964. The hired accommodation with the Department of Food on 1st January, 1965 was 8.28 lakh tonnes.

Imports of Foodgrains
(Thousand metric tons)

				Rice	Wheat	Others
1961	..	..	..	384	3,092	19
1962	..	..	..	390	3,250	—
1963	..	..	..	483	4,073	—
1964	..	..	..	644	5,621	—

PRODUCTION—Food production in 1964-65 has been officially placed at 87.2 million tonnes. Rice production in 1964-65 was 38.3 million tonnes.

Production of Foodgrains
(Millions tonnes)

Year		Rice	Wheat	Other Cereals	Total Cereals	Total Pulses	Total Foodgrains
1959-61	..	31.7	10.3	22.9	64.9	11.8	76.7
1960-61	..	34.2	11.0	23.1	68.3	12.7	81.0
1961-62*	..	34.8	12.0	22.6	69.4	11.6	81.0
1962-63*	..	31.9	10.8	24.3	67.0	11.4	78.4
1963-64**	..	36.5	9.7	23.3	69.5	9.9	79.4

RESEARCH AND TRAINING—There are *Sugarcane Breeding Institute*, Coimbatore, *Indian Institute of Sugarcane Research*, Lucknow and *Indian Central Sugarcane Committee*, New Delhi for various sugar improvements. *National Sugar Institute*, Kanpur continues to carry on its activities.

Introduction of Rationing—In pursuance of the decision taken at the Chief Ministers' Conference held in November, 1964, statutory rationing was introduced in Calcutta from 5th January, 1965. Informal rationing has also been introduced in Kerala since November, 1964.

*Partially Revised Estimates. } Subject to revision.
**Final Estimates.

FISHERY

FISH RESOURCES—India with a coast-line of 5,690 kilometres, along which numerous large, perennial rivers discharge their silt-laden waters in innumerable gulfs, creeks, bays and oceanic islands, has a fishable area of about 110,000 sq. m. The inland fishery resources of India include extensive river systems, vast network of irrigation canals, reservoirs, tanks, ponds, *jheels*, swamps, brackish water lakes and extensive estuaries. The main sources of fish-supply in India are inland fisheries, sea fisheries and estuarine and backwater fisheries.

To 50 p.c. of the people in India, specially of West Bengal, Maharashtra, Orissa, Madras and Kerala, fish is a staple food. Yet not even 2 oz. of fish per head are available per day.

Fish and allied industries provide employment for more than a million fishermen. It is estimated, there are 5,00,000 fishermen owning about 85,000 boats, catamarans and other crafts. On an average, a fisherman's catch in a year does not exceed 2,000 to 2,500 kg., whereas in western countries, the average catch per fisherman works out roughly to be 8,000 kg.

CENTRAL FISHERIES CORPORATION—The Union Ministry of Food and Agriculture have set up the Corporation with its headquarters in Calcutta on October 5, 1965.

The Corporation has been registered as a Government company with an authorised capital of Rs. 5 crores.

Although the Corporation will, initially, engage itself only in marketing fish in Calcutta, in course of time it will undertake developmental activities of both inland and marine fisheries throughout the country in consultation with the State Governments.

FISHING HARBOURS—The construction of a fishing harbour at Veraval in Gujarat is nearing completion. The construction of a fish-landing jetty at Mangalore has been completed. Fishing harbours at Nagapattinam in Madras, Kakinada in Andhra Pradesh, Porbandar in Gujarat and Vizhin Jam in Kerala have been initiated.

DIFFERENT KINDS OF FISHERIES

Inland Fisheries—Schemes relating to the development of inland fisheries aim at increasing production through surveys, introduction of fish-culture techniques, investigation of fish-seed resources and development of reservoir fisheries.

Marine Fishing—Scheme for the improvement of marine fisheries consists of mechanisation of fishing craft, exploratory and experimental fishing to locate new grounds, improvements in fishing methods, increasing the supply of fishing requisites and provision of facilities for the landing, preservation, transport and marketing of fish. Mechanisation of fishing craft and development of suitable designs of mechanised crafts for different coastal regions were undertaken. There are at present about 2,750 mechanised boats for operation. Orders have been placed for importing 390 marine diesel engines from Yugoslavia.

Estuarine and Backwater Fishing—Chilka lake in Orissa, backwaters, in Madras, Cochin and Travancore, deltaic areas of Sundarbans in W. Bengal and Mahanadi in Orissa are the principal sources of estuarine and backwater fish. The estuaries of Mahanadi and Ganga, stretching from Puri to Hooghly, are extensive fishing grounds, containing *hilsas*, pomfrets, prawns, *katlas*, cat-fishes *rohus*, etc.

FISHERY INDUSTRY—The total fish production in 1963 amounted to 10.46 lakh tonnes as against 9.75 lakh tonnes during 1962. Exports of fish products were valued at Rs. 7.15 crores in 1964-65. The quantity of fish products in 1964-65 was 21.1 million kilograms. Quick-freezing plant, cold storage and ice factory at Bombay are making good progress.

VARIETIES OF FISHES—More than 1,800 distinct species of fish are known to exist in the seas around the country and in the inland waters, but the varieties that are caught in appreciable quantities are limited in number.

The *sea-fish* groups include elasmobranchs, eels, cat-fishes, silverbar fish, herrings and anchovies, Bombay ducks, mackerels and perches, silver-bellies, pomfrets, flat fishes, mulupets, Indian salmon, jew-fishes, crustaceans and minor shell-fishes.

Fresh-water fishes are grouped under cat-fishes, mullets, carps, prawns, murels, featherbacks, eels, herrings and anchovies.

Among the fresh-water fishes, carps form the most highly esteemed variety, constituting about 34 p.c., such as *Rohu*, *Katla*, *Mrigal* and *Kalbous*. Other important varieties are cat-fish, wallago, bagarius, clarius, silundia and macrones belonging to this class. Trout has been introduced into hill streams in Kashmir, Kumaon (U.P.) and the Nilgiri Hills.

Of the *river-fishes*, the following may be specially mentioned: *Masheer* is available in the upper reaches of most rivers in India. *Chilwa* is a flat-sided, thin-bodied fish with his stomach running an edge. It occurs freely both in the North as well as in the South Indian rivers. *Murrel* varies from 2 to 3 ft. in length. *Batchwa* is small but excellent for eating. *Barils* have 14 species and they are widely distributed throughout India. *Olive Carp* is available in Madras and is also found in the fresh water along the coast from Kutch to West Bengal. *Mulley* has no scale.

As for *tank-fishes*, we have *Rohu*. Among the popular fatty fishes of Bengal are *Rohit*, *Katla*, *Vetki*, *Hilsa*, *Chital*, *Mrigal* and *Mahasol*. They are good sources of proteins, fat and vitamin A. Among the lean fishes, mention may be made of *Magoor*, *Koi*, *Singi*, *Tangra* etc., which are rich in proteins and easily digested.

Shell-fishes include oysters, crabs, lobsters, shrimps and prawns. Because they are coarse fishes, they are not easily digested. Unlike other fishes, shell-fishes contain a fair amount of carbohydrates and also in some cases, a small amount of iodine.

FISH PRODUCTS—Besides articles of food, fish yields several by-products, such as *fish-oil*, *fish-meal*, *fish-manure*, *fish-maws* and *shark-fins*. The most important of them is *fish-oil*, such as sardine

oil and shark-liver oil, which are now produced on commercial basis in India. The oil is used in the manufacture of paints, softsoaps, for softening hides, for tempering steel, for batching jute and after hydrogenation, in the preparation of edible fats. *Fish-liver oil* produces vitamins A and B, indispensable for wasting diseases. It is being manufactured by the Governments of Maharashtra, Madras and Kerala. The *Government Shark-Liver Oil Factory* is situated at Calicut, Kerala. Indian fishes, such as salmon, jew-fishes, cat-fishes yield '*Isinglass*,' a valuable article for the clarification of wines. Bombay, the east coast of Madras and the Sundarbans in West Bengal are the centres of trade of this commodity. Fish-scrap is converted into *fish-meal* as additional protein food for poultry and live-stock. Fish-refuse is being dried as *fish-manure*.

Fish-curing is also an important supplementary trade. The chief methods of curing fish in India are sun-drying and salt curing, by either dry or wet process.

FISH MARKETING—Organisations in the country are being gradually strengthened to meet the increasing needs of the fish industry. Refrigerated railway vans run between Calicut and Madras and Palasa and Howrah (W. Bengal).

DEVELOPMENT OF FISHERIES—Active interest for the development of fisheries was taken in India in 1944. Direct responsibility for fishing in extra-territorial waters was taken up by the Union Government after independence. Since 66.6 p.c. of the fish comes from sea annually, deep-sea fishing has been given priority in the Plans.

A unique experiment was made at Neendakara in Quilon (Kerala). An *Indo-Norwegian Deep-Sea Fishing Project* was started in 1952 on the basis of tripartite agreement between U. N., Norway and India, the object being to render assistance to under-developed countries for the development of fisheries and to improve socio-economic conditions of fishermen. The administration of the Indo-Norwegian Project which had been under the Kerala Government from its inception, was taken over by the Central Government from April, 1963. Its headquarters is now at Ernakulam. The Indo-Norwegian Project will build two more fisheries stations at Karwar in Mysore and at Cannanore in Kerala.

RESEARCH AND TRAINING—Research and training in inland fisheries is carried out at the *Central Inland Fisheries Research Institute*, Barrackpore and in sea fisheries, at the *Central Marine Fisheries Research Institute*, Mandapam. The *Deep-Sea Fishing Station*, Bombay and the *Offshore Stations* at Tuticorin, Cochin and Visakhapatnam conduct exploratory surveys for charting grounds. Another *Offshore Station* has been established at Mangalore. At the *Central Fisheries Technological Research Stations* at Cochin and Ernakulam experiments are conducted on gear materials, gear designs and fishery products. The *Central Institute of Fisheries Education* was established in Bombay in 1961. It imparts practical knowledge on all aspects of fisheries including administrative and extension method. A *Central Institute of Fisheries Co-*

operatives was established at Ernakulam in 1963. 8 central fisheries extension units organise training courses for different categories of personnel.

The Government of India have set up a *Central Board of Fisheries* for the integration and co-ordination of fisheries research and development activities in the country. The Board discusses at national level, problems connected with fisheries research and development and recommend suitable measures for better co-ordination of this work between the Centre, State and fisheries organisations.

AQUARIA AND MUSEUMS—The main aquarium of India is *Taraporevala Aquarium*, Marine Drive, Bombay. Attached to this aquarium is the *Marine Biological Research Stations*. There are a museum and an aquarium in Madras, which preserve specimens of all important marine and fresh-water fishes, many kinds of sharks, aquatic curios, etc. There is a small experimental aquarium of the *Orissa Fisheries Department* at Cuttack. A small museum exists in the *Central Fisheries Research Laboratory*, Lucknow.

PEARL-FISHERY—One of the important developments in the industry is the revival of pearl-fishing by the Madras Government. Pearl-fishery in the Gulf of Mannar, off Tuticorin coast, is one of the oldest trades of peninsular India. There are two types of oysters—(1) window pane oyster shells for decorative purposes and (2) real pearl oysters. The window-pane oysters are found in the open sea off Coromondal coast, Madras coast and Cochin coast. Two-thirds of the catch is taken up as Government share and one-third distributed among the divers.

ANIMAL HUSBANDRY

IMPORTANCE OF CATTLE IN INDIA—Indian economy is essentially based on agriculture; agricultural operations are to depend mainly on cattle to provide the motive force. Livestock farming and animal husbandry have, therefore, a significant role to play towards higher standard of living. India possesses more than one-fourth of the world's total cattle population. It is estimated that the annual direct contribution from our livestock by labour alone is over 1,000 crores of rupees and by manure another 1,000 crores.

Animal husbandry is a State subject, but under the Directive Principles of the Indian Constitution, the Centre has been assigned the role of organising it on a planned and scientific basis. The majority of our cattle are of a non-descript type. The lower standards of animal husbandry are clearly demonstrated by the poorer per capita consumption of milk in different parts of the country. For instance, the per capita milk consumption in Madras is 2.7 ounces, Kerala 1.4 ounces, Mysore 3.7 ounces, Assam 1.9 ounces, Orissa 1.8 ounces and West Bengal 2.6 ounces as against 14.75 ounces in the Punjab, 8.2 ounces in Uttar Pradesh and 8.7 ounces in Rajasthan.

The animal husbandry work is shared by *The Indian Council of Agricultural Research*, *The Indian Veterinary Research Insti-*

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tute, Izatnagar and Mukteswar, *The National Dairy Research Institute*, Karnal and *The Cattle Breeding Station* at Jabalpur.

DEVELOPMENT OF ANIMAL HUSBANDRY—The Schemes adopted by the Government for the improvement of animal husbandry in India are—

Key Village Scheme—This Scheme was initiated during the First Plan for increasing milk production and raising the draught efficiency of cattle in selected areas. Under the scheme, a village is selected in an area of three or four villages, covering about 500 cows over three years of age. In this area, breeding is controlled and confined to three or four bulls of superior quality, specially maintained at the centre for breeding purposes. The approved bulls are removed and castrated. Artificial insemination is also adopted for quicker progress. The Government have also started cattle breeding farms to supply quality bulls. During 1963-64, 10 new key village blocks were established, 10 existing key village blocks expanded and work was intensified in another 4 blocks. In addition, 3 Central Semen Collection Stations and 2 In-service Training Centres were also established. 1716 improved calves were taken up for subsidised rearing.

Feed and Fodder Development—The programme for the development of feed and fodder aims at encouraging the farmers to take up the production of fodder crops and grasses and has been in operation in all States excepting Nagaland and 3 Union Territories. During 1963-64, 68 Pasture demonstration plots were established, 9 farms were taken up for Pasturage improvement and 4 farms for production of seeds. Besides, construction of 106 silo pits was subsidised and 290 chaff cutters were distributed. *Fodder and Grazing Committees* are in operation in 13 States and 2 Union Territories.

Gausalas—*Gausala Development Scheme* has been taken up with the starting of Gausalas. These institutions serve as a cattle breeding-cum-milk production centres. During 1963-64, 31 Gausalas were taken up for development as cattle breeding-cum-milk production centres.

Gosadan Scheme—aims at segregation of old, uneconomic and unproductive cattle. Gosadans have been established in different parts of the country. There are 12 gosadans in the country.

Chamaralayyas—Well-equipped *Chamaralayyas* have been added to gosadans for economic and scientific utilization of hides and other end-products of the carcasses.

Gosamvardhana—*The Central Council of Gosamvardhana* has been established to advise the Central and State Governments on the problems of improvement of cattle-wealth. This Council organises annual Gosamvardhana Week and All-India Milk Yield Competition.

Nomadic Cattle Breeders' Scheme—A scheme for rehabilitating nomadic cattle breeders has been started in four States—Andhra Pradesh, Rajasthan, Uttar Pradesh and Gujarat, by providing breeders with better bulls and veterinary aid, while in some places they are being settled on waste lands on co-operative basis.

Stray and Wild Cattle Catching Scheme for the rounding up of

stray and wild cattle, is in operation in Punjab, Uttar Pradesh, Madhya Pradesh, Jammu & Kashmir and Delhi.

Improvement of Hide-Flaying, Curing and Carcass Utilisation Scheme—The Model Training-cum-Production Centre in Lucknow, which was developed with assistance from the Netherlands. Government and the F.A.O. imparts training in hide-flaying, tanning and footwear, and leather utilization.

All-India Central Stud Farm was started in Bangalore in 1955 as part of an intensive scheme for the improvement and development of cattle. The farm consists of pedigree breeds from all parts of India as well as foreign breeds. The pedigree breeds consist of the Sindhi, Tharparkar, Gir, Murrah, Ongole and Kangayam types and the Jersey from America. The semen of pedigree breeds is available to the pilot unit centres.

National Livestock Committee—This Committee was founded to spread the knowledge of principles of sound animal and poultry breeding among the breeders throughout the country by organising cattle and poultry shows. A large number of trophies and cash prizes are awarded to the winners at these shows. All-India Cattle Breeders' Conference is also organised at the All-India Show.

Animal Welfare Board—For the promotion of animal welfare generally and for the protection against cruelty, an *Animal Welfare Board* has been set up under *Prevention of Cruelty to Animals Act, 1960*. The Board imported a mobile animal clinic and a veterinary ambulance for providing veterinary aid.

Government Livestock Farm, Hissar—is an important organisation where animals are culled and allotted to bonafide breeders.

Calf Rearing Scheme—This Scheme aims at the salvage of superior calves from high-yielding milch animals maintained at the milk colonies. Under this scheme, the selected calves of six months of age and above are purchased and distributed free of cost to the bonafide cattle breeders, co-operative organisations, etc.

VETERINARY RESEARCH—The demand for trained veterinary personnel increased considerably on the setting up of Community Development Blocks and also as a result of development schemes under Five-Year Plans. So the Government of India initiated measures to render financial assistance to the State Governments for (1) opening new veterinary colleges; (2) for expansion of training facilities at some existing colleges; (3) for starting double shifts at veterinary colleges.

The Indian Veterinary Research Institute carries on research teaching, manufacture of veterinary biologicals and diagnostic and advisory work. It also prepares doses of preventive vaccine.

DIVISION OF LIVESTOCK—Livestock is generally divided into three classes, namely, (a) *Bovine*, comprising oxen and buffaloes; (b) *Ovine*, comprising sheep and goats; and (c) *others*, comprising horses, ponies, mules, donkey, camels, and pigs.

Species of Cattle—There are well-defined breeds of cattle and well-defined breeds of buffaloes in India. Some of the best varieties are mentioned here :

Sindhi—This breed hails from Sind, but several pedigree herds of it have been established in India, particularly in Kathiawar on the West Coast. It is a distinctive dairy animal.

Sahiwal—Though originally belonged to central undivided Punjab, it is available in Karnal, Uttar Pradesh and Madhya Pradesh.

Harina—The home of this breed is the area covered by the districts of Rohtak, Hissar, Gurgaon, part of Karnal and Delhi.

Murrah—The cows of this breed are good milker and the bullocks are excellent for draught. It is available in southern Punjab, Delhi and northern Uttar Pradesh.

Gir—The home of this breed is Kathiawar. Pure specimen of this breed is available in Junagadh.

Kankrej—The home of this breed is the area to the south-east of the Rann of Kutch and also along the Banas and Sarawati rivers. It is one of the heaviest of Indian cattle.

Tharparkar—Coming originally from the arid semi-desert tracts of south-east Sind, this breed is mostly bred in India today in the north-east portion of Maharashtra as well as in Marwar.

Kangayam—The name of this breed is derived from the Kangayam division of Coimbatore district, where it has been in existence for a long time.

Ongole—The home of this breed is the Ongole tract of the Madras State, comprising Ongole, Guntur, Narasaraopet, parts of Bapatla, etc.

Goats, Pigs, etc.—*Sheep* contribute substantially to the national income by providing essential products in the form of wool, meat, skins and manure. In addition to wool, sheep provide mutton, manure, pelts, hair, milk, butter, and serve as pack animals.

There are about 14 breeds of sheep in India, which can be divided into two distinct types, namely, *woolly* and *hairy*.

The major portion of wool production is classed as carpet grade. The yield of wool varies from $\frac{1}{4}$ th of a pound to 4 pounds per sheep.

Sheep are found in the temperate Himalayan region, the dry northern region, the southern region and the eastern region. The temperate Himalayan region includes Kashmir, U.P. and the hill districts of U.P. and Punjab. The dry northern region includes Rajasthan, south-east Punjab, Saurashtra, Kutch and parts of western U.P. The southern region includes Maharashtra, Mysore, Andhra, Madras and parts of Madhya Pradesh. The eastern region includes Bihar, Orissa, West Bengal and Assam.

Goats are also the principal source of meat supply in the country. The important varieties of goats are—Amnapuri type of the Deccan plateau, the Surti of West India, the black and white bearded variety of West Bengal, and Ganjam and Telengana varieties. Goats are prized for their meat and milk.

India's *pigs* belong to two principal species, namely, Indian wild boar found throughout India and pigmy hog found in the forests at the base of the Himalayas in Nepal, Sikkim and Bhutan. Pigs are useful for bristles, lard meat (pork, ham, bacon) and skins.

Horses are mainly used for transport. The Kathiawar breed of horses known as *Kathi*, is famous for their great power and endu-

rance. The Marhatta pony, the little *Gujarat* and *Dimthadi* of the Deccan are also famous. The ponies of Manipur are regarded as the best in India. Bhutia pony is also famous for their power of endurance and weight-carrying capacity.

CATTLE DISEASE—The reported mortality from the rinderpest in India carry every year two lakhs, but the actual number of deaths is much higher. As a result of researches at *The Indian Veterinary Research Institute*, Izatnagar and elsewhere, vaccines have been evolved to make them immune from the disease. In 1954, the *Central Rinderpest Control Committee* was set up and in October 1954, a pilot project was initiated in Bombay, Hyderabad, Andhra, Mysore, Madras and Kerala. Production centres of vaccines have been established at Ranipet (Madras), Calcutta, Lucknow (U. P.), Hissar (Punjab) and at the Veterinary Research Institute at Izatnagar (U. P.). The *National Rinderpest Eradication Campaign*, started in the First Five-Year Plan, continues to function in different States.

POULTRY—Poultry include those domesticated birds which reproduce freely and are of economic importance. They embrace chickens, turkeys, ducks, geese, guinea fowls, pigeons, peafowls, etc. The most important of them is chicken. The important poultry-producing areas are : Madras (25%), West Bengal (12.6%), Bihar (11.2%), Assam (8.9%), Bombay (8.5%), Madhya Pradesh (6%). 5 *Regional Poultry Farms* have been set up in Maharashtra, Orissa, Mysore, Himachal Pradesh and Delhi. 4 out of the 5 *Regional Poultry Farms* were being raised to 5,000 layer farms. Under a Centrally sponsored scheme, one *Regional Duck Farm* has started functioning in West Bengal.

7 intensive poultry development blocks, 11 feed manufacturing units and 4 centres for collection, grading and distribution of eggs are expected to be set up. One large Breeding Farm has started functioning near Gurgaon and another at Bombay, both with foreign collaboration.

Fowls—Domestic fowls of India may be divided into two broad groups : *desi* and imported or exotic. The term *desi* covers all indigenous fowls which are generally not of pure breed because of the promiscuous multiplication. The imported or exotic breeds which have been acclimatised in India, are mostly White Leghorn and Rhode Island Red. Small number of other breeds are Black Minorca, Plymouth Rock, Australorp, New Hampshire, Light Sussex, Brown Leghorn, etc.

Ducks—India has approximately 16 million ducks, representing 18 p.c. of the domesticated duck population of the world. Madras and W. Bengal account for more than 75 p.c. of ducks in India. The average annual egg production of an Indian duck is 90 to 100. Ducks are hardy, free from contagious diseases and largely reared in the eastern and southern parts of the country.

PIGGERY DEVELOPMENT—2 regional *Pig Breeding Stations* functioning at Aligarh and Haringhata (W. Bengal). The third regional breeding-cum-bacon factory has been set up at Aarey in

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 Maharashtra and the establishment of the fourth one at Kasarpalli
 in Andhra Pradesh has been sanctioned.

ANIMAL PRODUCTS—Besides animal products of milk and wool, the principal animal products of India are blood, bones, ivory, tallow, and hides and skins. Bones are used as manure and for the manufacture of buttons, handles, toys, glue and are a source of superphosphates. The supply of horns comes from U. P., Punjab, Madras and West Bengal. Buttons, toys, manure, glue, gelatine etc., are made from horns. Ivory is used for the manufacture of ivory goods, bones and teeth. Its supply comes from Assam, Western Ghats and Mysore. Tallow is derived from the fat of beef, mutton and goats. Its printing uses are as an adulterant, lubricant and illuminant. It is also used in the manufacture of soaps and candles.

LIVESTOCK POULTRY CENSUS *(In lakhs)*

<i>Livestock</i>		1956	1961
Cattle :			
(a) Males over 3 years	..	6,49	7,25
(b) Females over 3 years	..	4,99	5,42
(c) Youngstock	.. ..	4,38	4,88
Buffaloes :			
(a) Males over 3 years	..	65	77
(b) Females over 3 years	..	2,23	2,50
(c) Youngstock	..	1,61	1,85
Sheep	..	3,92	4,02
Goats	..	5,54	6,09
Horses & Ponies	..	15	13
Other livestock (comprises Mules, Donkeys, Camels and Pigs)	..	68	73
Total livestock	..	30,65	33,64
<i>Poultry</i>	.. ..	9,48	11,42

FORESTS

FOREST WEALTH OF INDIA—Forests in India play an important part in the country's agricultural and economic development. India's forests cover 2.69 lakh square miles, accounting for nearly 22 p.c. of the country's total geographical area. The per capita forest area is only 0.2 hectares in India. The *National Forest Policy Resolution* of 1952 suggested that India should aim at maintaining 33.3 p.c. of the total land area under forests; the proportion to be aimed at being 60 p.c. in the hilly regions and 20 p.c. in the plains. India contains an infinite variety of forest vegetation, governed by the variations in climate, soil elevation and other local factors. In addition to providing the raw materials for paper, match-

wood and plywood industries, forests are also the source of a number of minor products like gum, resins, tanning materials, medicinal herbs, etc.

FOREST IMPROVEMENTS—The Government Schemes include, among others, development of farm forestry, economic plantations, rehabilitation of degraded forests, improvement of forest communications, development of forest research, nature conservancy schemes and forest protection measures, surveys, etc. The main schemes are as follows—

To make people aware of the utility and need of tree-planting, *Vanamahotsava*—the annual festival of planting trees, was started in 1950. *Vanamahotsava* week is celebrated by planting sapplings of common plants, such as *babul*, *peepul*, *mango*, *neem* and *bamboo*.

The *Central Board for Forest Utilization* was set up in 1939. It deals with various issues relating to forest research programmes, scientific exploitation of forest resources, etc. The *Central Board of Forestry* was constituted in 1950, for the purpose of evolving all-India policy to increase the area under forests. Its various functions are :—(1) maintenance of adequate standards for training of officers ; (2) co-ordination of forest researches conducted in Central and State institutes ; (3) promotion of legislation necessary for the management of private forests ; (4) adoption of conservation measures affecting forest resources and soil. *Soil Conservation Work* is being carried on in a more intensive scale. *Soil Conservation Research, Demonstration and Training Centres* are maintained by the *Central Soil Conservation Board* at Dehra Dun, Kotah, Vasad, Jodhpur, Bellary, Ootacamund, Chatra (Nepal), Chandigarh and Agra. The *Desert Afforestation Research Station*, Jodhpur, carries on research activities on forestry, agrostology and agronomy. A *Pasture Development Scheme* for the reclamation and control of Thar Desert has been launched in 9 districts of Rajasthan. An integrated *All-India Soil and Land Use Survey Scheme* is being executed by The *Central Soil Conservation Board* with 4 zonal centres at Delhi, Nagpur, Bangalore and Haringhata (W. Bengal). The *Central Board of Rational Allocation of Timber* is working to smooth differences regarding the supply and acceptance of timber.

FOREST TYPES IN INDIA—Indian forests are divided into 5 types : (1) *Evergreen*, (2) *Deciduous*, (3) *Dry*, (4) *Hill* and (5) *Tidal or Littoral*. *Evergreen* flourishes where rainfall is 80"—120". Such regions are the west coast of the country and the eastern sub-Himalayan tract. These forests include ebony, teak, rosewood, iron-wood, bamboos, *neem* and tamarind. *Deciduous* (rainfall 60" to 80") occupies the larger part of the Deccan and is also known as monsoon forests. The trees are large-sized and form very remarkable timbers, such as teak, *sal*, *paduk*, redwood, sandalwood, *anjan*, etc. The *Dry forests* (rainfall 30" to 40") are found in the desert regions of Rajasthan and Punjab and its plants are characterised by thick and fleshy stems and leaves and mostly consists of ticket of shrubs and a few stunted trees. The *Hill forests* are found in South India above 5,000 feet and in the Himalayas above 3,000 feet in altitude. The trees are

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evergreen, of which the following are the most prominent—oak, picea, dodar, pines, firs, chestnut, walnut, maple, elm, ash, birches, laurels, poplar, rhododendron and spices of abies. The *Littoral forests* are found in the deltas of the Ganga, the Mahanadi, the Indus and also to some extent, in the regions washed by the high tide and salt water. They are rich sources of fuel. These forests are known as *Man-grove forests*.

CLASSIFICATION OF FORESTS—Forests in India are classified according to—(a) Ownership, (b) Legal status, (c) Composition. From the ownership point of view, the forest area is divided into (i) States, (ii) Communal and (iii) Private.

From the administrative point of view, forests have been classified into *Reserved*, *Protected* and *Unclassified*. The first category is reserved for Government use and no entry is allowed to any member of the public. The protected forests are under the control of the Department, but contracts for their exploitation are given and the public are allowed to make use of them within the terms of the contracts. The unclassified forests consist of shrubs and trees in villages. They are not under the control of the Department.

From the point of view of the outturn, forests are classified into *merchantable* and *inaccessible* (unprofitable).

SOIL CONSERVATION—The *Central Soil Conservation Board* has been functioning from 1953 for systematic soil conservation work. It undertakes soil analysis and combats soil erosion. It is responsible for organising, co-ordinating and initiating research in soil conservation and imparting training to nominees of different State Governments in soil conservation work. The Board is running 9 research centres, located at Dehra Dun, Ootacamund, Vasad, Kotah, Jodhpur, Chandigarh, Agra, Bellary and Chatra (Nepal). Of these, the first four are also Training and Demonstration Centres.

ADMINISTRATIVE SET-UP—Under the Constitution, the jurisdiction over forests vests in the States. The revenue from these is derived from the sale of timber, fuel, bamboo, fodder grass and other minor products, such as lac, tanning materials, gum, resins, medicinal herbs, etc. It also includes fees for grazing and the proceeds of the sale of the confiscated drift and wind wood. The Forest Department is treated as a commercial department.

The forest administration of the Government of India is carried on by the *Department of Agriculture*. The Inspector-General of Forests is the technical adviser to the Government in forest matters. Forests are, however, a State subject. The States are divided into one or more Forest Circles, each in the charge of a Conservator of Forests; while in those States where three or more Forest Circles exist, there is also a Chief Conservator who is the head of the Department of his State. The Circles are divided into a number of Forest Divisions, in the charge of the members of the Superior Forest Service. Each Division contains a number of Ranges, under Forest Rangers or Deputy Rangers. Heavy Divisions are also sometimes divided into sub-divisions. The Ranges are sub-divided into a number of rounds and beats.

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FOREST EDUCATION AND RESEARCH—The scientific forest management in India owes its inception to Dr. Brandis, Professor of Bombay University, who was engaged by the Government of India in 1856. Later in 1863, he was appointed first Inspector-General of Forests in India. It was the result of his initiative that Forest Departments were organised throughout India.

The nucleus of forest research and education in India is traceable to a forest school, started in 1878 in Dehra Dun under the auspices of the Survey of India.

The research and training activities on forestry and forest products are carried on at the *Forest Research Institute* and Colleges at Dehra Dun and the subordinate units at Bangalore and Coimbatore.

There are *Central Arid Zone Research Institute*, Jodhpur and 9 regional research centres for intensified research and training activities in soil and water conservation.

INDIA'S FOREST PRODUCTS AND USES—India has 3,000 species of economic plants, besides a number of animal products. Apart from timber for structural purposes and fuel, forests supply wood. Acetic acid, acetone, methyl alcohol, certain oils and creosote are some of the derivatives of wood. We may mention also valuable timber species, such as conifers (*pinus*, *firs*, *deodars*), and the well-known *teak* which is met with throughout the Deccan plateau. The chief among other species of commercial importance are *dipterocarpus*, *acacias*, *sissou*, *sandalwood* and *bamboos*. Forests, in addition, yield a bewildering variety of minor forest products. Outturn of Indian forests is of two kinds: (1) *Major products*, consisting of timber and firewood and (2) *Minor products*, consisting of medicinal plants, essential oils, resins, fatty oils and fats, waxes, starches, gums, mucilages, tans, dyes, bamboos, canes, fibres, flosses and grasses, animal products like honey, lac, ivory and bee-wax and materials for packing and wrapping.

DESCRIPTION OF FOREST PRODUCTS—Oil trees are *Chandana* or Sandalwood, found in South India (Mysore, Coorg, Western Ghats, Nilgiris). It is a hard, close-grained, yellowish-brown wood, strongly scented by the oil. It makes beautiful carved boxes and small articles. The oil is also extracted from the seeds and nuts of various other trees, such as *Chalmugra*, *Satinwood*, *Croton*, *Coconut*, *Palm*, *Pine*, *Deodar*, *Kusum*, *Neem*, *Mahua*, *Arjun*.

Sal is one of the most important timber trees of India and has very hard, heavy and tough wood with reddish-brown colour. It is a large tree with glossy foliage and grows freely in the northern and central Indian regions. The wood is largely used for building construction and railway sleepers. It is found in the tropical Himalayan regions from Sutlej to Assam.

Teak (*Sagun*) is a large deciduous tree with grey bark which peels off easily, grown mainly in the frost-free parts of India. It has long rough leaves and small oval fruit with a stone in it. It is immune from attacks of white ants and insects for very long period. It grows in the Deccan plateau of Madhya Pradesh, Orissa, Bihar, Maharashtra and Madras. It does not corrode iron. It is mainly used for

boat and ship-building, railway carriages and sleepers, tool handles and furniture, etc. Its minor uses are in the extraction of tar, and its leaves are given to the tasar silk-worms.

Arjun is a heavier and harder wood than teak. It grows all over the deciduous regions.

Kusum is a very heavy, hard and tough wood. It grows in the deciduous forests. 'Lac' insects are also reared on it.

Ebony is a very dark green or greenish black wood of great strength. It is obtained from all over the deciduous regions excepting N.-E. parts.

Siris is found all over India and is a popular choice for a roadside tree. The distinctive features of *Siris* are its large pods which hang on the tree when it has been stripped of its leaves. It has rounded brushlike flowers of greenish yellow colour with a delightful fragrance.

Palas is important for its crop of 'lac' insects. It grows largely in Chotanagpur district of Bihar and over the plains of northern India.

Mahua is very common in Chotanagpur area. Its flowers are important articles of food. A course spirit is distilled from *Mahua*.

Semul is well-known for the cotton it yields. Its wood is very soft and perishable and is suitable for matchbox manufacture.

Jarool is employed for making cheap classes of furniture. It is found mainly in Assam, West Bengal and Chotanagpur.

Deodar or Himalayan cedar is the most important timber tree of the western Himalayas. It grows from 100 to 200 feet in height. The wood is moderately hard, scented, oily and very durable. It is used for building construction, particularly for doors and windows.

Pine—The Blue Pine or Kail as it is popularly known, is a large evergreen conifer with bluish feathery foliage. It often reaches 120 ft. in height and is found throughout the temperate Himalayan regions.

Shisham (or *Sissoo*) is a large deciduous tree which grows near river banks from Punjab to Assam. It is a favourite roadside tree. The sap-wood is perishable but the heart-wood is heavy, hard and durable. It is largely used for furniture. It also makes lasting carts, boats and wheel spokes.

Toon—A handsome fast-growing big tree with many uses, growing in moist localities throughout India, often reaching a height of 80 ft. with a girth of 10 feet. The bark of the toon is used to make medicine and the flowers to make a yellow dye. The wood is excellent for furniture, and takes polish very well on its red grain.

Oak is available in the eastern Himalayas, Khasi Hills and in Manipur. It is used for buildings, agricultural implements, axe-handles, etc.

Rosewood is found in various places from Nepal to Travancore. It is used for furniture, cabinet-work, keels of vessels, agricultural implements, combs, ornamental articles, carved chairs and tables.

Satinwood is found in the dry forests of Circars, Konkan, Deccan and Karnatak and is common in the Satpura range. It is largely used for cabinet work, picture frames, furniture, etc.

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Fir is grown in the outer Himalayas, Punjab and Kashmir and is used for packing cases, crates, shingles, boards and paper pulp.

Nahar tree occurs in abundance in the forests of Himalayas in Assam and West Bengal, of the Western Ghats and in Andamans.

Babul tree grows in western India is used for all forms of agricultural implements.

Sundari is available in the deltaic regions of West Bengal, particularly in the Sundarbans and on the coasts of Orissa. It is a very hard wood.

Canes and *Bamboos* are extensively found in eastern Nepal, Sikkim, Bhutan, Assam, West Bengal, Madhya Pradesh, the Deccan, Konkan and on the Coromondal coast. Bamboos grow everywhere in India. It has numerous varieties, from giant bamboo of Assam to dwarfs of dry region. It is used for paper-making and for other various objects. Cane is used for basket-works, mats, walking sticks, ropes, etc.

Grasses are generally used for fodder for the cattle. *Sabai* grass is used for paper-making. *Munjh*-grass grows in all parts of India, specially in Punjab and is used for thatching, paper-making, chairs, baskets, ropes and cordage. *Rhea* grass found in Assam and West Bengal, is used for belting, sheeting, lace, net, cordage, sacking, etc.

Lac is an important Indian forest product. The lac-producing trees are *Palas*, *Peepul* and *Kusum*. The principal places of production are M.P., Bihar, West Bengal, Assam, and Gujarat. Chotanagpur district in Bihar raises 60 per cent of India's total output.

Bee-wax and *Honey* are also important forest products. Bee-wax is used in candles, foundry moulding, calico printing and medicine. It is largely used by the shoemakers of India.

Gum and *Resin*-yielding trees in India are *Babul*, *Catechu*, *Sal*, *Pine*, *Mango*, and *Banyan* and are worked for making resin and turpentine oil. Resin is used for shellac adulteration, in paper mills and soap factories, etc., while turpentine has a demand for medicine and varnish.

TANNING MATERIALS—Various tanning materials are found in Indian forests, most important of which is myrobalan which grows in abundance in Madras, Maharashtra, West Bengal, Chotanagpur, Orissa and other places.

Sandalwood is used for producing sandalwood oil and soaps and scents. At present Mysore and Kerala supply all the sandalwood needed by the world. Sandalwood is the exclusive monopoly of the State, both in Kerala and in Mysore.

OIL FROM TREES—Besides the annual cultivated oilseed crops, India has nearly a hundred oilseed-bearing perennial trees. Some 86 of them are of known commercial value. A brief account of some of these are given here :

Mahua—The oil percentage in the kernels varies from 33—34. *Neem* trees are grown all over the country and are particularly abundant in some areas of U.P., Madras, Maharashtra, Orissa, Rajasthan, M. P., Punjab, Delhi and Bihar. *Karanjh* grows wild in the

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 forest areas of Orissa, Mysore, U. P. and Andhra Pradesh. The oil cake can be used as a manure for paddy and for rabi crops. *Pisa* is a small tree found in the warm and moist forests on the lower hills of the Eastern and Western Ghats, Sikkim, Maharashtra and Mysore. *Kokuar* trees grow in Maharashtra and Gujarat. *Kamala* trees occur in the forest areas in Maharashtra and West Bengal (Jalpaiguri & Darjeeling). *Undi* is one of the most widespread oil-bearing trees growing in coastal and central regions as well as in hilly tracts. *Khakan* tree grows in dry, sandy and saline tracts of northern India. It is found in abundance in northern Gujarat, Rajasthan and Punjab. *Kusum* is found in dry forests in most parts of India. It occurs in the sub-Himalayan tracts upon the altitude of 8,000ft. *Kusum* tree serves as a host for the 'lac' insects. The oil content in the kernel is 57 p.c.

DAIRY FARMING

MILK PRODUCTION IN INDIA—Dairying, like agriculture, is one of the basic industries of India, and milk and milk products contribute no less than Rs. 620 crores to the national dividend. The huge quantity of about 1,500,000 maunds of milk produced per day in the country, is obtained from about 67,000,000 cows and buffaloes maintained in nearly 40,000,000 small fragmented holdings throughout the country.

In the fields of urban milk scheme 29 dairy plants were in operation during 1964-65. Pilot milk schemes are in operation in 15 cities. The present average daily milk through these dairy plants and pilot schemes is about 10 lakh litres. Dairy plants are also being set up in 20 other centres.

The number of animals in the cattle colonies, at Haringhata and Madhavaram, has increased to 14,000.

The Amritsar dairy project which was commissioned in December, 1962, is designed for the marketing of 20,000 litres of milk daily and the manufacture of 1,500 tons of spray-dried skimmed milk annually. A similar factory has been set up at Rajkot.

MILK ADULTERATION—The *Agricultural Marketing Adviser* to the Government of India says in his report of 1950 that "adulteration of foodstuffs, including milk, is not uncommon in Western countries, but the position is nowhere as bad as in our country. Adulteration is so widespread that consumers have become almost indifferent to quality."

POOR YIELD—The average annual yield of milk per cow in India is 413 lb. which is about the lowest in the world, as compared to 8,000 lb. in the Netherlands, 7,000 lb. in Australia, 6,000 lb. in Sweden and over 5,000 lb. in the U.S.A.

RESEARCH ASSOCIATIONS—The *Indian Dairy Science Association* was formed in 1948, with the object of advancing the cause of the science of dairying in India.

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Indian Dairy Council was inaugurated in 1948 with the object of promoting and safeguarding the interests of the dairy industry in India. It is a common platform on which representatives of various interests of the milk industry, such as producers, consumers, traders and technicians, could meet together for developing it on sound and economic footing.

TRAINING—Dairy training is being provided in the *National Dairy Research Institute*, Karnal, *Southern Regional Station*, Bangalore, *Agricultural Institute*, Anand, *Dairy Technical Institute*, Aaray and *Allahabad Agricultural Institute*. Another institute has been set up at Haringhata (W. Bengal).

DAIRY SCHEMES—The dairy and milk supply programmes in the country include establishment of city milk plants, colonisation of cattle, establishment of milk product factories and rural creameries, surveys and rural dairy extension and training of technical personnel.

Three creameries are being set up at Aligarh, Barauni and Junagadh. Milk product factories have been started at Rajkot, Amritsar, Anand and Mehsana.

A cattle feed compounding factory is being set up at Anand by Kaira District Co-operative Milk Products Union Ltd., Anand. It manufactures cheese, cream, butter, baby food, ghee, condensed and skimmed milk.

A milk plant, with a capacity of 50,000 litres a day, will be set up at Baroda. It will supply low-fat milk to school children. The plant, costing Rs. 11.5 lakh, will be donated by the UNICEF, and the required technical assistance will come from the FAO.

The Government of West Bengal has also a big milk colony at Haringhata near Calcutta. Delhi has also started its milk scheme.

The Government of India have constituted a *National Dairy Development Board* to advise them on technical matters relating to dairy development.

FOREIGN AIDS—The following aids have been received: (1) Two milk products factories at Anand and Mehsana with the assistance of Denmark; (2) New Zealand is to build a milk plant at Indore under Colombo Plan; (3) Australia is aiding for a milk-bar equipment for Greater Bombay Milk Scheme; (4) UNICEF is assisting for setting up dairy plants at Madurai and Kanpur.

GHEE PRODUCTION IN INDIA—The annual production of ghee in India is estimated at one crore and fifteen lakh maunds. In order of importance, the main ghee-producing areas are Punjab, U.P., Madras and Bihar, which account for 15.7, 13.8, 9.8, and 5.4 p.c. of the total production respectively. Thus three-fifths of the ghee production is concentrated in northern and western India and the remaining two-fifths is scattered in the rest of the country.

The ghee adulteration by mixing *Vanaspati* (hydrogenated oil) has become so widespread that the Government of India had put the matter in the hands of *Ghee Adulteration Committee*, which has re-

commended that every lot of *Vanspati* produced in a factory should be accompanied by a certificate that it gives Baudouin test; that the *Vanspati* should be coloured; and that the *Vanaspati* should be fortified by synthetic vitamin 'A', so that its nutritive value may be increased. The Government have accepted the first and the last recommendations. As regards the second, further experiments are being conducted, for the colour suggested is unstable and involves expenditure.

WILD LIFE

INDIA'S RICHNESS IN WILD LIFE.—India has a rich and varied fauna comprising fish, bird and mammal. The diversity which manifests itself is due to variations in rainfall, temperature and climate. With all types of forests, India has practically all types of birds and animals. More than 500 different species of mammals are found in India. The Indian bison is the largest of the existing bovines and the Indian rhinoceros is the biggest of all rhinoceroses now inhabiting the world. The Indian elephant is much more handsome compared with its African cousin. The deer family is still richer and some of the most beautiful species, e.g., chital, black-buck, etc., are found in India. Chital is considered the most beautiful of all species of deer. Among the reptiles, the most dreaded species like cobra, krait, viper, etc., are all present.

PHYSICAL REGIONS OF ANIMALS.—For the purpose of wild life in India, we can divide the country into three broad physical regions—(1) *The Himalayas*, (2) *Indo-Gangetic Plain* and (3) *The Deccan*.

Himalayas.—The Himalayas occupy the region between the gorges of the Indus and the Brahmaputra covering a length of about 1,500 miles. The Himalayas can again be divided into three regions—Western Himalayas, Central Himalayas and Eastern Himalayas.

Western Himalayas.—supports rich and varied life, such as markhor, ibex, wild yak, bharal, Tibetan antelope, brown and black bear, tahr, Kashmir stag or hangul, barking deer, snow leopard, serow, goral, sambar and ammon. The markhor, wild sheep, snow leopard and brown bear occur nearer the snow-line above 10,000 ft. on the Tibetan border, and in Ladakh, in particular, one comes up against ammon, Tibetan antelope, wild yak, bharal, ibex and Tibetan gazelle.

Central Himalayas.—While most of the Western Himalayan wild life persists in this region, ibex and markhor disappeared and brown bear are seldom met with to the east of the Ganges. Panther is plentiful. The main sports of the Central Himalayas are Jaunsar-Bawar and Tehri-Garhwal and Kumaun.

Eastern Himalayas.—Both panther and tiger are common along the foothills. Occasionally the great one-horned rhinoceroses are also met with.

Indo-Gangetic Plain—This plain skirts round the Himalayas like a moat from the Bay of Bengal to the western boundaries of India. At the foot of the Himalayas we have tiger, panther, sambar, bear, barking deer, elephant, buffalo, bison and rhinoceros (Assam and W. Bengal), chital deer, hog deer, swamp deer and four-horned antelope. In the central plains we have black-buck, nilgai, pig, porcupine. In the Aravallis and Southern Highlands, we have tiger, panther, sambar and barking deer, chital deer and sloth bear.

Deccan—The Deccan plateau is buttressed in the north by the Vindhyas, Satpuras and Kaimurs with their typical flat tops. Thus three distinct regions may be recognised in the south—(1) West Coast comprising the Western Ghats, the Nilgiris, Annamalais, Cardamom hills and the Malabar Coast, (2) East Coast including the Karnatic, Eastern Ghats and the bulk of the plateau below the Godavari, (3) Central plateau above the Godavari where the Western Ghats are low enough to let the monsoon pass through. These above regions have gazelle, antelope, hyaena, wolf, hare, rodents, bison, sambar, sloth bear, wild dog, swamp deer, buffalo, elephant, Nilgiri langur, etc.

SPECIALITIES OF WILD LIFE—Much of the wild life of India's sanctuaries is peculiar to India and is not found in other parts of the world. *Swamp deer* is found only in India, the four-horned antelope and nilgai are also found in India. The spotted chital, perhaps the most beautiful of all deer, are seen in India. The black-buck is not found elsewhere than in India and Pakistan. The one-horned rhinoceros cannot be found elsewhere in the world.

ADMINISTRATION—Under the Indian Constitution, wild life is a State subject and has no Central responsibility. So the sanctuaries are mostly under the control of the Forest Department of the respective States. The Forest Department of nearly all States are advised by the Wild Life Boards, while at the Centre there is an Indian Board for Wild Life. In some States, a few 'national parks' have been constituted, while in others such places are known as 'wild life sanctuaries'.

VARIETIES & DESCRIPTION OF WILD ANIMALS

Wild sheep and goats—Shapiru of Ladakh and Bharal of Tibet are more like goats than the sheep; Markhor is a magnificent goat inhabiting Gilgit and Baltistan; Himalayan Lehr is a big goat; Nilgai Tahr is found in the Western Ghats; Scrow is a peculiar goat inhabiting the Himalayas, Nilgai (blue bull) occurs in Punjab and Himachal Pradesh and from the base of the Himalayas to Mysore.

Deer—Kashmir stag (Hangul) inhabits the forests of Kashmir and musk deer, the Himalayas; Sambar is the finest deer in India; Spotted deer (Chital) is found only in India, Pakistan, Nepal and Ceylon. Hog deer is found in the sub-Himalayan tract, Swamp deer in Uttar Pradesh, Madhya Pradesh and Assam and Barking deer in the Indo-Gangetic plain.

Antelopes—Tibetan antelope and black-buck are exclusively Indian animals; four-horned antelope is found in Punjab and south of the Himalayas.

Wild oxen and buffalo—Indian buffalo and Indian bison (Gaur) are found in Madras, Kerala, Mysore, etc.

Dog Tribe—Wolf is found from the Himalayas to Peninsular India; Indian wild dog is found in Ladakh down to the southend of the Deccan plateau.

Hyaenas occur freely all over India.

Bears—Himalayan brown bear, Himalayan black bear, sloth bear are found only in India and Ceylon.

Rhinoceroses are no longer found anywhere in India except in Assam and West Bengal.

Elephants are found in the Western Ghats, Mysore, Coorg, the Nilgiris, Orissa, U. P., Assam and West Bengal.

Cat—Panther is met with in almost all forests, hunting leopard (Cheetah) is now extinct, snow leopard lives in the snowy range of the Himalayas, clouded leopard is found only in the dense evergreen forests of Sikkim and Bhutan. Tiger is found practically throughout India, Asiatic lion is now to be only in the Gir forest (Saurashtra).

BIRD PROTECTION—The *National Committee for Bird Preservation* was formed in India in 1952 for the protection of some of the species of birds, which are now in danger of extinction. There are in India about 1,500 main species of wild birds. These are again sub-divided into several smaller sub-species. An important factor contributing to the extinction of certain species was the indiscriminate killing of rare birds for their feathers. The following are the famous bird sanctuaries of India—(1) *Ghana Sanctuary* near Bharatpur (Rajasthan), about 100 miles south of Delhi and 30 miles west of Agra, is the finest bird sanctuary in India; (2) *Vedanthangal Sanctuary*, some 500 odd miles of Madras; (3) *Serinjapatam Sanctuary* in Mysore State.

VANISHING ANIMALS—The *Indian Board for Wild Life* has listed 36 animals which need protection—lion, wild ass, pangolin, brow antler deer, swamp deer, musk deer, urial, four-horned antelope, clouded leopard, Nilgiri thar, lesser panda, Kashmir stag, wild buffalo, rhinoceros, Nilgiri langur, golden langur, gazelle, markhor, spotted lisang, pigmy hog, black-buck, snow leopard, golden cat, marble cat, hunting leopard or cheetah, dugong, great Indian bustard, Jerdon's couzar, mountain quail, pink-headed duck, white-winged wood duck, tragopan, crocodile, lithery turtle, water lizard and python.

NATIONAL PARKS AND SANCTUARIES

Gir Forest—This occupies about 500 square miles of area in Gujarat. This is the last stronghold of the Indian lions. There are now only about 250-300 lions left in the country. The best season for visiting is from March to May. It is 38 miles from Junagadh in Gujarat.

Keoladeo Ghana Sanctuary—This sanctuary used to be the far-famed duck shooting preserve of the rulers of the former princely State of Bharatpur. Among the bird sanctuaries in India, it is one

of the best breeding places for water-birds. Prominent among the birds inhabiting this sancttuary are open-bill stork, painted stork, egret, darter or snake-bird, white ibis, spoonbill and grey heron. The sanctuary is situated about 100 miles south of Delhi. The railway station is Bharatpur.

Dachigam Sanctuary—is the old game preserve of the former rulers of Kashmir. It is particularly noted for hangul or Kashmir stag. It is situated in Kashmir at an altitude of 6,000—12,000 feet above sea level and is 13 miles from Srinagar. Himalayan black bear and wild pig are also found here. Numerous other birds are also to be seen here.

Corbett National Park—was established in 1935 and was then known as Hailey National Park. It was renamed as the Corbett National Park in 1957, in honour of the famous hunter Jim Corbett. Situated at the foot-hills of the Himalayas in a *dun* country, it has fine forests. The park is the home of the tiger. In addition to tiger, the park has leopards, hyaenas, jackels and wild dogs. There are also a number of wild elephants, sambar, chital, hog deer, barking deer etc. Birds of many species can be seen. This park is 125 miles in extent and is situated 152 miles north-east of Delhi. The railheads are Ramnagar and Haldwani.

Chandraprabha Sanctuary—is in Uttar Pradesh and is regarded as the alternative home of the lion. Three lions from the Gir forest were released here early in 1957. The sanctuary has nilgai and wild pig. The Indian gazelle, sambar, chital, sloth bear are also found. Among the birds there are the peafowl, grey partridge, quail, green pегion, besides many others. The sanctuary is situated at the eastern end of the Vindhya range of mountains and 43 miles from Banaras. It covers an area of 30 sq. miles and is accessible for visiting almost throughout the year.

Kanha National Park—is undoubtedly one of the best places for Indian wild life. Probably nowhere else in India can so many heads of animals be seen out in the open, at certain times of the year. The Indian swamp deer or barasingha is the stately animal for which Kanha is famous. The black-buck and fine herds of chital can be seen here. Pea-fowl and jungle-fowl are among the 90 species of birds found here. The park extends over 97 miles and is situated on the central highlands of India. It is about 97 miles from Jabalpur.

Shivpuri National Park—is situated in Madhya Pradesh. The State Government converted this place into a national park in 1953. Since then the wild life here has been increasing steadily. The Indian gazelle or chinkara is found in this park in good numbers, besides the sambar, chital, nilgai, wild pig, sloth bear, hyaena, etc. The tiger and leopard are also seen here. It is situated on the main Agra-Bombay Road, 72 miles south of Gwalior, occupying 31 sq. miles.

Hazaribagh National Park—was set up recently. This park is 75 square miles in area and lies on the main Patna-Ranchi Road, 11 miles from Hazaribagh town. The nearest railway station is

Kodarma. Most of the animals and birds indigenous to India are to be found here.

Jaldapara Sanctuary—was constituted in 1941 for the protection of Indian rhino and consists of reverain forest along the river Torsa in North Bengal, not far south of the Bhutan border. In addition to 50 or 60 rhinos, there are sambar, swamp deer, hog deer, barking deer and wild pig. This 36 sq.-mile sanctuary lies just south of the railway line which connects North Bengal and Assam with the rest of India. The nearest railway station is Hashimara.

Kaziranga Sanctuary—This sanctuary in Assam is now the main centre of the great Indian one-horned rhinoceros. This sanctuary is believed to contain 250 rhinos. Kaziranga occupies about 166 sq. miles on the southern bank of the Brahmaputra. There are two air-fields—one at Gauhati and the other at Jorhat from where the place can be reached. The sanctuary also contains wild buffalo, sambar, swamp deer, hog deer, pig and wild elephant. Numerous water fowls are found in *jheels* and marshy lands.

Manas Sanctuary—in Assam, lies at the foot of the Himalayas where the river Manas flows through a magnificent gorge. It occupies an area of 105 sq. miles in the extreme north-west of North Kamrup district in Assam, near the Bhutan border. The distance by road from Gauhati is about 95 miles. The nearest railway station is Barpeta Road. There is an abundance of wild animals and birds in this sanctuary. Fine *mahseer* and *bokar* fishing is also to be had.

Bandipur Sanctuary—was once a game-preserve of the Maharajas of Mysore. This sanctuary is situated on the main railway road between Mysore city and Ootacamund. The nearest airport is Bangalore. The place is noted for its fine herds of gaur (Indian bison) and chital or spotted deer. Other wild life includes wild elephant, barking deer, common langur, bonnet macaque, pig, tiger, leopard and sloth bear. Among the birds pea-fowl, grey jungle-fowl and spur-fowl are famous.

Ranganathitoo Bird Sanctuary—in Srinagarpatna in Mysore, is one of the few bird sanctuaries of India. It consists of islands in the Kaveri river and occupies 1.66 sq. miles and is situated 9 miles from Mysore. The open-bill stork, white ibis, night heron, Indian darter, cormorant and cattle egret can be seen here.

Mudumalai Sanctuary—in Madras, is adjacent to Bandipur Sanctuary of Mysore. It extends over 114 sq. miles at the foot of the Nilgiri Hills and lies on the main road from Ootacamund to Mysore, being 42 miles from Ootacamund. The main animals seen here are elephant, gaur (Indian bison), sambar, chital, barking deer, mouse-deer, four-horned antelope, pig, tiger, leopard, sloth bear, wild dog, common langur, Malabar squirrel, hare and porcupine. Birds include the Malabar grey hornbill, grey jungle-fowl, red spur-fowl and partridge.

Vedanthangal Bird Sanctuary—It is a lake situated in the district of Chingleput in Madras occupying about 74 acres in area. It is 54 miles south of Madras. It is a famous breeding place for birds. The

birds that breed here are spoonbill, open-bill stork, grey heron, Indian darter, cormorant, egret, white ibis and night heron.

Periyar Sanctuary—It consists of an artificially created lake of about 10 sq. miles. The whole sanctuary is about 260 sq. miles. It is situated on the Kerala side of the Kerala-Mysore boundary and is approached by the main Cochin-Madurai road. The nearest railway stations are Kottayam (Kerala) and Madurai (Madras). The animal most seen here is the wild elephant, of which there are supposed to be hundreds. Then there is the gaur (Indian bison), sambar, barking deer, pig. Occasionally the tiger, leopard and sloth bear are also seen here. Water-birds are fairly represented here and other birds include hornbills.

LAND REFORMS

OBJECTS OF LAND REFORMS—Ownership rights of the landlords under the Zamindari system were morally and legally dubious. Naturally, therefore, land reform was the principal aim of the Congress and also of the new Constitution. The Planning Commission recommended that land policy should be such as would reduce disparities in wealth and income, eliminate exploitation, provide security for tenants and workers and promise equality of status and opportunity to different sections of the rural population. The principal objectives of tenancy reform as recommended by the Planning Commission are : (1) reduction of rents, (2) security of tenure, (3) ownership for tenants.

Land being a State subject under the Constitution, the responsibility for enacting and enforcing land reforms rests with the State Governments. The Central Committee of Land Reforms of the Government of India reviews from time to time progress of land reforms in the country and advises the State Governments on further measures that may be necessary.

Effect of the abolition of Zamindari System : (1) The intermediary rights are abolished and compensations paid to the Zamindars. The amount of compensation in most cases is a multiple of net income from intermediary right. The multiple decreases with increase in net income and the result is that the Zamindar is compensated at lower rate.

(2) Compensation is paid partly in cash and partly in bonds. Smaller Zamindars usually get cash payments.

(3) The Zamindar is allowed to retain land for personal cultivation, but in most cases a ceiling on land holding is introduced.

(4) After the abolition of Zamindari system, the tenant is responsible for paying rent directly to the Government. On paying a specified amount, he acquires ownership right over his holding.

(5) Ceiling on land holdings.

(6) Consolidation and prevention of fragmentation of holding.

(7) Development of co-operative farming and co-operative village management.

Abolition of Intermediaries—In 1947, intermediary tenures like *Zamindari*, *Jaigirdari* and *inams* covered more than 40 per cent of the area of the country. The abolition of these tenures has been completed except for a few minor tenures, such as service *inams* and *inams* held by religious and charitable institutions. As a result of this reform, about two crore tenants came into direct relationship with the States and improved their social and economic position. Besides, considerable areas of wasteland and private forests came under State management and ownership. This enabled the State Governments to distribute a sizable area among the landless agricultural workers and the small farmers during the past decade or so.

The main problem now engaging the attention of the State Governments is the assessment and payment of compensation. About Rs. 236 crores have been paid so far, Rs. 106 crores in cash and Rs. 130 crores in bonds. About Rs. 334 crores have yet to be paid.

Ceiling on Holdings—The principle that there should be a ceiling on land holdings was accepted in the First Plan. The Second Plan reiterated the recommendation that there should be a ceiling at three family holdings. Reduction in the disparities in ownership of land was a necessary condition for the building up of a progressive, co-operative rural economy. Legislation for ceiling on holdings has been enacted in all the States except in the former Punjab area of the State of Punjab.

BHOODAN—This is a voluntary land gift movement started by Acharya Vinoba Bhave. He says, "In a just and equitable order of society land must belong to all". In practical application, it means asking for voluntary donations of one-sixth of the land for redistribution among the landless. In non-agricultural sector, it assumes various forms, such as *Sampattidan* (donation of money or other resources), *Buddhidan* (giving of mental abilities), *Jivandan* (giving of life), etc. The movement began on April 18, 1951. Its target is to get 500 lakh acres of land. The movement has been enlarged into *Gramdan*, i.e. donation of entire villages.

About 42 lakh acres were donated under Bhoodan till September, 1963. Over 10 lakh acres of this donation have already been distributed. Excluding the land which is considered unfit for cultivation, 17.5 lakh acres of Bhoodan lands are still to be distributed among the landless agricultural workers. The total number of Gramdan villages is now 6,412.

INDUSTRIES

PRIVATE SECTOR, PUBLIC SECTOR AND MIXED ECONOMY—The year 1950 is a great landmark in the economic history of India, for the adoption of the First Five-Year Plan. A *National Planning Committee* was previously set up by late Jawaharlal Nehru for the economic development of the country. But this Plan did not place adequate emphasis on the development of agriculture.

Second attempt was made by Purushottamdas Thakurdas and J. R. D. Tata for National Planning. This attempt also failed.

There was complete change of situation after independence when *First Five Year Plan* began in 1950-51, when the total industrial and commercial State Undertakings in India added upto a mere Rs. 44 crores. The *First Five Year Plan* with its agricultural sector saw an addition of only Rs. 57 crores to the investment in industry and commerce in the Public Sector. It was only by the end of the *Second Plan*, that the Public Sector in India had taken firm roots when the investment in the Public Sector Undertakings had increased to Rs. 971 crores. The investment target for the State Undertakings in the *Third* and the *Fourth Five-Year Plans* is Rs. 1,520 crores and Rs. 3,200 crores respectively.

In the Private Sector, industrial investment in the beginning of the *First Plan* was about Rs. 750 crores. This increased to about Rs. 2,000 crores in 1960 and is expected to be about Rs. 3,200 crores by the end of the *Third Plan*. The *Fourth Plan* envisages a further investment of Rs. 2,400 crores. The total investment in the Private Sector is expected to be about Rs. 5,860 crores by the end of 1970-71.

After independence, the Government of India issued two *Industrial Policy Resolutions* of 1948 and 1956. The *Industrial Policy Resolution of 1948* laid down that the manufacture of arms and ammunition, the production and control of atomic energy and the ownership and management of railway transport was to be the exclusive monopoly of the Union Government. In industries like coal, iron & steel, aircraft manufacture, ship-building, manufacture of telephones, telegraphs, wireless transmission apparatus and mineral oils all new concerns were to be started in the Public Sector, while the existing Private Undertakings in these fields were to be permitted to continue for 10 years. When the Government decided to take over any concern, compensation was to be awarded on a fair and equitable basis.

In 1955, towards the close of the *First Five Year Plan*, the Indian Parliament adopted the "*Socialistic Pattern of Society*" as our major social objective. So Government issued in 1956 the *Second Industrial Policy Resolution* which stated "the objective of the socialistic pattern of society as a national objective as well as the need for planned and rapid development required that all industries of basic and strategic importance, or in the nature of public utility services, should be in the Public Sector".

Industrial Policy Resolution of 1956 classified industries into three categories—(1) industries, the future development of which is the exclusive responsibility of the State; (2) industries in the development of which the State is generally to take initiative specially in setting up new undertakings but in which private enterprise is also expected to supplement the State efforts; (3) these comprise all the remaining industries, the future development of which is left to the Private Sector.

Industrial policy of the Government of India envisages the co-existence of the public and private sector undertakings in a number

of industries including steel, machine tools, fertilizers, drugs, pharmaceuticals, and petroleum products. The Government has no intention of nationalising the private undertakings in these fields. Whenever it is found feasible, the Government also collaborated with private undertakings—Indian or foreign. Oil India, Cochin Refineries, Indian Explosives, etc. are some such examples.

A number of Government agencies, e.g., the *Industrial Finance Corporation of India*, the *State Industrial Finance Corporation* and the *National Industrial Development Corporation* have been set up to provide financial assistance to Private Sector Undertakings. The State Bank of India and the Life Insurance Corporation of India, both of which are Government owned, provide financial help to Private Sector undertakings.

The Public Sector in India has grown largely through the establishment of new undertakings rather than through the process of nationalisation of the existing ones. The Public Sector in pursuance of the ideal of a mixed economy, has taken to pioneering industrial activity in spheres where the Private Sector would have refused to tread and as a result the State is in *business* to exploit the abundant resources of men and material in the country for the benefit of people. Mixed economy means the sector in which both public and private sectors work or have free access.

Capitalist economies have some features which are disturbing; socialist economies also have some features which are unpleasant. Mixed economy offers a third alternative. In short, the concept of mixed economy is the economic counter-part of our concept of non-alignment in foreign affairs. Mixed economy retains the free markets of capitalism and widens the sphere of public ownership as, under socialism. In a mixed economy, the public sector and the private sector share economic activity as partners.

The two sectors of the economy, public and private, do not, and cannot function separately. They impinge on each other at numerous points.

ORGANISATIONAL SET-UP—On the 9th June, 1964, the Ministry of Industry was reconstituted as the Ministry of Industry and Supply, comprising three Departments: (i) *Department of Industry*; (ii) *Department of Heavy Engineering*; and (iii) *Department of Supply and Technical Development*. As a result, the following changes were made: 1 (a) From the list of subjects allotted to the Department of Industry, 'Textiles, Handloom Industry, Jute and Sericulture' were transferred to the Ministry of Commerce; and (b) 'Co-ordination and development of village industries including Khadi and Handicrafts and Ambar Charkha' were transferred to the Department of Social Security. (2) The subjects allotted to the Department of Heavy Engineering in the former Ministry of Steel, Mines and Heavy Engineering were transferred to the Ministry of Industry and Supply under the Department of Heavy Engineering. The subject 'Development of electronics and co-ordination among its various users, was allotted to the Department of Industry. With effect

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from 5th February, 1965, the Department of Heavy Engineering has been merged with the Department of Industry.

The Department of Industry is responsible for the active promotion of industrialisation of the country by encouraging the orderly development of large and small-scale industries, both in the private and the public sectors.

While the Department of Industry frames the over-all industrial policies, the executive work connected with the implementation of these policies has been distributed among several attached organisations of the Department. The attached organisations and their functions are described below :—

(i) *Office of the Development Commissioner for Small-Scale Industries, New Delhi*—This Office is responsible for the development and fostering of small-scale industries.

(ii) *Office of the Economic Adviser, New Delhi*—This Office renders technical advice to the Ministry on all issues of an economic nature. It also compiles the official index number of prices in India, conducts research on prices and tariffs, employment, foreign trade and industries, and provides assistance in bringing out publications of the Ministry relating to economic, commercial and industrial matters.

(iii) *Office of the Controller-General of Patents, Designs and Trade Marks, Bombay*—This Office was established in pursuance of Trade and Merchandise Marks Act, 1958, replacing the Trade Marks Act, 1940, and the Indian Merchandise Marks Act, 1889. Under the Act, the Trade Marks Registry and the Patent Offices have been amalgamated under the administrative charge of a single officer, viz. the Controller-General of Patents, Designs and Trade Marks. This Office is responsible for administering Trade Marks Act, 1958 and also Patents and Designs Act, 1911.

Under the new Act, Government have established the Trade Marks Registry with its Head Office at Bombay and Branch Offices at Calcutta, Delhi (Okhla) and Madras.

(iv) *Office of the Salt Commissioner, Jaipur*—This is an attached office with 5 regional offices at Sambhar, Bombay, Madras, Calcutta, and Mandi (Himachal Pradesh), and is responsible for the administration of the Salt Cess Act, quality control of salt, running of salt laboratories and model farms, and Government salt factories. It also arranges, in consultation with the State Governments the distribution of salt throughout the country.

(v) *Indian Standards Institution, New Delhi*—This is a quasi-Government institution which is responsible for drawing up standards for the products of Indian industries. It was established in 1947.

The following Public Sector Undertakings are functioning under the control of this Ministry :

(A) *Corporations whose main object is to promote industrial development :*

(1) National Industrial Development Corporation Ltd. and (2) National Small Industries Corporation Ltd.

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(B) *Industrial projects which are either in the construction stage or in production :*

(1) Hindustan Cables Ltd., (2) National Newsprint and Paper Mills Ltd., (3) National Instruments Ltd., (4) Hindustan Salts Ltd., (5) Hindustan Photo-Films Ltd., (6) Instrumentation Ltd., and (7) Sambhar Salts Ltd. (subsidiary of Hindustan Salts Ltd.).

Instrumentation Ltd. is a Government company formed to implement the projects for the manufacture of precision instruments with the technical and financial assistance of the Government of the USSR. The Company was registered on March 21, 1964, and has its registered office at Kota.

Sambhar Salts Ltd. has been formed as a subsidiary company of the Hindustan Salts Ltd. to manage the Salt Works at Sambhar, previously owned and managed by the Hindustan Salts Ltd. The Company has been registered on September 30, 1964, and has its registered office at Jaipur.

The National Development Corporation reported 33 new inventions in 1963-64, bringing the total of inventions to 681. Fifteen cash awards have been given for new inventions in 1964. The awards are given by the Inventions Production Board.

INDUSTRIAL POLICY OF THE GOVERNMENT—The Industrial Policy of the Government of India was first announced on April 6, 1948. This envisaged a mixed economy with an overall responsibility of the Government for the planned development of industries and their regulations. Industries were classified under three heads : (1) arms and ammunition, atomic energy, river valley projects and the railways, were declared to be State monopolies. (2) Coal, iron and steel, aircraft, telephones, telegraphs, wireless, shipbuilding and mineral oils, were to be the responsibility of the State. The existing private undertakings in these industries were, however, to continue for at least ten years. (3) The rest of the industrial field was left open to private enterprises.

A fresh statement of industrial policy was announced by the Government on April 30, 1956, due to the acceptance of a socialistic pattern as the objective. Under this, the State can assume direct responsibility for the future development of industries over a wider area than before. Under the revised policy, 17 key industries as specified in Schedule A, are the exclusive responsibility of the State and 12 in the Schedule B will be progressively State-owned. The remainder (not listed) will be left to the private sector. The statement promises private industries undertaking "as much freedom as is consistent with the targets and objectives of the National Plan." It assures fair and non-discriminatory treatment where both sectors exist in the same industry.

Schedule-A Industries—Arms and ammunition and allied items of defence equipment ; atomic energy ; iron and steel ; heavy castings and forgings of iron and steel ; heavy plant and machinery required for iron and steel production, for mining, for machine-tool manufactures and for such other basic industries as may be specified by the Central Government ; heavy electrical plant, including large

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hydraulic and steam turbines ; coal and lignite ; mineral oils ; mining of iron ore, manganese ore, chrome ore, gypsum, sulphur, gold and diamond ; mining and processing of copper, lead, zinc, tin, molybdenum and wolfram ; minerals specified in the Schedule to the Atomic Energy (Control of Production and Use) Order, 1953 ; aircraft ; air transport, railway transport ; ship-building ; telephones and telephone cables ; telegraph and wireless apparatus (excluding radio receiving sets ; generation and distribution of electricity.

Schedule-B Industries—All other minerals except "minor minerals" as defined in Section 3 of the Minerals Concession Rules, 1949 ; aluminium and other non-ferrous metals not included in Schedule A.

Machine tools, ferro-alloys and tool steels ; basic and intermediate products required by chemical industries, such as the manufacture of drugs, dye-stuffs and plastics ; anti-biotics and other essential drugs ; fertilizers ; synthetic rubber ; carbonization of coal ; chemical pulp ; road transport ; sea transport.

REGULATION OF INDUSTRIES—The powers under the industrial policy of the Government enunciated in 1948 and 1956 had to be acquired by legislation. The first step was the amendment of the Constitution. The second step was the passing of *Industries (Development and Regulation) Act of 1951*. Under this Act, all new and existing undertakings required to be licensed. The Government are authorised to examine the working of any industrial undertaking continued to be mismanaged and the Government is empowered to take over its management or control.

By exercising this power the Government aims at securing a proper utilisation of the country's resources, a balanced development of large and small industries and a proper regional distribution of the various industries. At present 162 industries come within the scope of this Act.

A *Central Advisory Council* consisting of the representatives of industry, labour, consumers and primary producers to advise the Government on all matters concerning industries was constituted.

Besides the *Central Advisory Council of Industries*, *Development Councils* have been set up for various industries. A number of panels and expert committees have been appointed to study various industries.

National Productivity Council—was set up in Feb., 1953 as an autonomous body. The Council is responsible for devising ways and means for promoting higher levels of productivity in all sectors of the national economy and creating productivity consciousness among industries. Local Productivity Councils have been set up in industrial centres. So far 46 local Councils, and six Regional Directorates at Bombay, Calcutta, Madras, Kanpur, Bangalore and Ludhiana have also been established.

Quality Control—The Indian Standards Institution continued to make efforts for creating Standard-consciousness and maintaining high levels of quality of manufactured and finished goods. The total number of standards in force on 31st October, 1964 reached the figure of 2780. The total number of standards adopted up to 31st

October, 1964 was 2215. 207 new licences were granted in 1964 bringing the total number of licences (Certification Marks) to 822.

MONOPOLY COMMISSION'S REPORT—The Monopoly Commission has suggested the setting up of a permanent body statutorily, primarily to continue and prevent the evils of restrictive and monopolistic practices.

The Commission has come to the conclusion that sufficient evidence exists to show that attempts by monopolists or near monopolists to keep out fresh competitors in various ways in this country are by no means rare, and that in certain goods of common use exorbitant prices are charged in the absence of competition.

The Commission has found that practices such as hoarding and creating artificial scarcities in the market, price fixation or re-sale price maintenance, exclusive dealing contracts and tie-in-sales by manufacturers are prevalent on a fairly large scale.

The Commission feels convinced that the dangers from concentrated economic power and monopolistic and restrictive practices are not imaginary, but do exist in a large measure either at present or potentially.

The Commission states that widespread dislike for big business exists among the masses disturbing the mutual goodwill among large sections of the community. The Commission had described what it calls the evil effects of economic power arising out of monopoly on the country's economy, the most serious of which is the risk of emergence of monopoly with its attendant evils and high prices for the consumer deterioration in quality and isolation of the small industrialists.

According to the draft Bill, the permanent body will consist of at least three members and the Chairman will be a Supreme Court Judge.

It will have the power to institute an enquiry either on receipt of a complaint from Government or on the reference of a case to it by a director of investigation attached to it.

After a judicial enquiry, it will, where it considers necessary, issue an order calling upon the party to desist from and discontinue the practice complained against. Such order will have mandatory force and will be final, subject only to appeal to the Supreme Court.

This body will have the power to take action and only in cases of restrictive practices as they are generally understood but also in cases where any enterprise refuses to sell at the usual rate except on reasonable grounds.

The Commission has recommended the establishment of efficient public sector units to counteract concentration in private hands. It has also urged liberalisation of licensing policy and emphasised the need for non-sectional newspapers as checks to big business controlled Press.

The managing agency system and inter-corporate investment were two important factors which hastened the process of concentration of economic power in the hands of a few families, the report says.

Analysing the danger to political democracy posed by too much

of concentration economic power, the Commission says that the best protection from this danger can be provided by the political parties themselves refusing to accept financial or other assistance from business houses in their election campaigns. The Commission has stressed the need to put down corruption in the administrative sphere. Once the politicians free themselves from the corrupting influence, if any, of big business, it will be easier for them to deal with any corruption of Government officials, according to the report.

Dealing with the various causes which prevent small industrialists from coming up, the Commission says, "The advertising strength of the big business, reinforced in some cases by its control over newspapers, is a further factor in aiding the elimination of the small man business—a development which is bad for the country." His elimination not only destroys a good training ground for business talent and managerial skill but also increases the imbalance in the distribution of national wealth and income.

The Commission has also suggested that in the issue of import licences and to prevent abuses of licences granted to actual users or established importers, care should be taken to protect the consumers against exploitation by enterprises enjoying monopolistic or near-monopolistic positions.

The Commission concedes that there is some force in the contention that the section of the Press under the control of big business tends to obstruct the free formation of public opinion by presenting too rosy a picture of the performances and practices of big business in general and by slurring over many of their malpractices.

At the same time the Commission feels that any attempt to curtail big businessmen's control over the Press which runs counter to fundamental rights of free expression guaranteed to all citizens of India, must be ruled out.

It stresses the necessity and desirability of having more and more independent newspapers free from sectional affiliations.

In regard to the public sector monopolies, the report says that these monopoly concerns should not be allowed to enjoy special immunity and made subject to the permanent body's jurisdiction in the same manner as private sector units.

The Commission has not made any recommendation either for abolition or control of the managing agency system, because it feels that even if it were to be totally abolished, its place would be taken by some other system of group management.

The Commission has not made any recommendation either for abolition or system, because it feels that even if it were to be totally abolished, its place would be taken by some other system of group management.

Among the non-legislative measures recommended by the Commission to curb the growth of economic concentration are : Promotion of small-scale industries, encouragement of consumer co-operatives, patronage by purchasing authorities of Government to the smaller industrialists and the setting up of consumer societies, and watch against exploitation of consumers by producers or distributors.

FINANCIAL ASSISTANCE TO INDUSTRIES—For the rapid industrial development, the Government of India set up special financial institutions for medium and long-term credits to industrial enterprises. The Government gives financial assistance either by granting loans on special terms or by participating in equity capital. The Director-General of Supplies and Disposal, the central purchase organisation of the Government of India, has been encouraging indigenous industries through its stores purchase policy. In addition to Industrial Finance Corporations, a number of investment or development Corporations has been set up either with direct or indirect participation by the State. (For the details of the Institutions which render financial help to the industries, see *Financial Institutions* Section).

COMMITTEES & COUNCILS—There are several Committees and Councils under this Ministry for the development of industries :

Central Advisory Council of Industries—It was constituted under the Industries (Development and Regulations) Act, 1951, to advise the Government on all matters concerning the development and regulation of industries. There is a *Standing Committee* of this Council.

Development Councils—have been set up under the Industries (Development and Regulations) Act, 1951, for the following industries : (i) heavy chemicals, (ii) internal combustion engines, power-driven pumps, air compressors and blowers, (iii) bicycles, sewing machines and instruments, (iv) sugar, (v) light electricals, (vi) heavy electricals, (vii) drugs and pharmaceuticals, (viii) woolen textiles (ix) art silk, (x) machine tools, (xi) non-ferrous metals, (xii) oils, soaps and paints, cosmetics and toiletries, (xiii) food processing, (xiv) organic chemicals, (xv) automobiles, automobile ancillaries, transport vehicles, tractors and earth-moving equipments, (xvi) paper, pulp and allied industries, (xvii) leather and leather goods and pickers, (xviii) glass & ceramics.

Panels—have been set up where industries are not sufficiently developed or advanced. They examine the various policies facing the industries.

National Productivity Council—was started in February, 1958 as an autonomous body with representatives of the Government, employers, labour and others, with the object to inculcate productivity consciousness in the country and to apply the latest techniques of increasing productivity in industries. The Council has the following organisations, such as management seminars, industrial engineering, industrial management, study team, fuel economy service. The Council has established 6 Regional Productivity Directorates at Bombay, Calcutta, Madras, Kanpur, Bangalore and Ludhiana manned by specialists for organising productivity training. It has already set up 46 local councils at various industrial centres in the country.

Industrial Estates—The Government have started in several places Industrial Estates for the private industrialists so that they can use the machineries for the production of their goods. Latest addition to these Industrial Estates is an estate for producing leather goods in Madhavaram, Madras. It will have 21 units.

FOREIGN CAPITAL—The Government's policy regarding the foreign capital was stated in the Industrial Policy Resolution of April, 1948 and in the Prime Minister's statement in the Constituent Assembly in 1949, which said—

(1) The participation of foreign capital and enterprise should be carefully regulated in the national interest, e.g., by ensuring that the major interest in ownership and effective control should, save in exceptional cases, be in Indian hands and that the training of suitable Indian personnel for the purpose of eventually replacing foreign experts will be insisted upon in all such cases ;

(2) There will be no discrimination between foreign and Indian undertakings in the application of general industrial policy ;

(3) Reasonable facilities will be given for the remittance of profits and repatriation of capital consistent with the foreign exchange position of the country ;

(4) In the event of nationalisation, fair and equitable compensation shall be paid.

The Planning Commission has also recommended that the inflow of foreign capital should be encouraged. With that end, it has recommended that Indian and foreign capital should collaborate in new ventures.

According to a Reserve Bank study, the total outstanding foreign investments in the private sector (other than Banking) amounted to Rs. 7,000 million at the end of 1960. The largest single source of official capital was International Bank for Reconstruction and Development, accounting for nearly 63 p.c. Countrywise, the U.K.'s share was 65 p.c. of the total foreign investments.

During 1964, 405 cases of foreign collaboration were approved by Government.

PUBLIC SECTOR COMPANIES—The Public Sector enterprises under the administrative control of this Ministry are set up in the form of companies in which the shares are held by the President or his nominees and which are managed by Boards of Directors which include both officials and non-officials. These Companies fall in the following 4 main categories :

(a) *Companies whose main object is to promote industrial development but which are themselves not directly responsible for production*, such as National Industrial Development Corporation, The National Small Industries Corporation, Indian Handicrafts Development Corporation, etc.

(b) *Industrial Projects which are in the construction stage*, such as Heavy Engineering Corporation, Hindustan Photo Films Manufacturing Co. Ltd. and Hindustan Organic Chemicals Ltd., etc.

(c) *Industrial Projects in production*, such as Sindri Unit of the Fertilizer Corporation of India, Hindustan Machine Tools, Hindustan Antibiotics, Hindustan Cables, National Instruments, Nahan Foundry, etc.

(d) *Trade Promotion*—This is the main objective of the fourth category of companies which include the State Trading Corporation.

Fertilizer Corporation of India—The Nangal Chemicals and Fertilizers Ltd. and Sindri Fertilizers and Chemicals Ltd. ceased to be separate entities and became part of the single Corporation under the name of Fertilizer Corporation of India from 1st January, 1961 with an authorised capital of Rs. 75 crores. The Sindri Fertilizer Factory went into production in 1951 and produces ammonium sulphate. A factory was started at Nangal (Punjab) in 1961 for the production of nitro-limestone and heavy water. Additional units are being set up in the public sector at Trombay, Namrup, Gorakhpur, Korba and Durgapur with capacities of 90,000, 45,000, 80,000, 1,00,000 and 100,000 tons of nitrogen respectively. Another unit is being set up at Neyveli producing 70,000 tons of nitrogen. The Corporation earned a net profit of Rs. 2.62 crores in 1964-65.

Hindustan Aeronautics Ltd.—was incorporated in October, 1964. Initially, the Aeronautics India Ltd. was formed on August 16, 1963 for the manufacture of aircraft, aero-engines, electronic equipment, missiles etc. and had taken over from the Indian Air Force on June 1, 1964, the Aircraft Manufacturing Depot at Kanpur. The aircraft manufacturing project being undertaken in collaboration with the USSR Government was assigned to the Company on March 30, 1964 and on October 1, 1964, the Company was amalgamated with Hindustan Aircraft Ltd., Bangalore. The amalgamated Company has been named as the Hindustan Aeronautics Ltd. and is responsible for the following units: (1) Aircraft Factory at Bangalore, (2) Aircraft Manufacturing Depot at Kanpur, (3) Airframe Factory at Nasik, (4) Aero-engine Factory at Koraput and (5) Electronic Equipment Factory at Hyderabad. The authorised capital of the Company on March 31, 1964 was Rs. 25 crores, the paid-up capital being Rs. 1.63 crores.

Hindustan Aircraft—was established at Bangalore. The Government of India and the Government of Mysore are the only two shareholders. It is now a Government factory for manufacturing aircraft. In 1947, HAL was entrusted with the manufacture of Percival Prentice Trainer aircraft for IAF. In 1950, the Govt. of India entered into a licence agreement with De Havilland Co., U.K. for the manufacture of Vampire Jet Aircraft in HAL. In 1956, the Govt. of India entered into an agreement with Messrs. Folland Aircraft Ltd., U.K. for the manufacture of the Gnat, at HAL. The factory has also been building supersonic jet aircraft. It has designed and developed a light four-seater aircraft, *krishak* and a light multi-purpose aircraft, *puspak* and a six-cylinder piston aero-engine.

The Hindustan Aeronautics Ltd. (Bangalore Division) earned a crore of rupees as profit in 1963-64. During the year HAL handed over the first batch of supersonic jet fighters to the Indian Air Force, and the first India-made basic jet trainer, HJT-16, made its maiden flight. Other important items in the year's production were Orpheus-703 engine, first batch of Dart-7 engines (for AVRO-748), and 64 *puspak* ultra-light trainers. The Rail Coach Division of HAL turned out 250 integral broad-gauge coaches, making the total 1,125.

Air India Corporation—Air India International Corporation was incorporated on 15 June, 1953, taking over the assets and business of Air India International Ltd. In 1962, the word 'International' was

dropped by an amendment to the Air Corporations Act (See also *Index*). CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

Indian Air Lines Corporation—was set up on 15 June, 1953. The total capital provided by the Government on 31st March, 1964 was Rs. 21.94 crores (See also *Index*).

Chittaranjan Locomotive Works—For lessening the dependence of the Indian Railways upon foreign sources the Government started at a cost of Rs. 14 crores, a Locomotive Workshop at Chittaranjan (Mihijam), West Bengal in 1948. Production commenced on 26 January, 1950. The first steam locomotive was driven out of assembly lines on November 1, 1950. It now produces about 200 WG-type locomotives a year. It has also begun production of electric engines. A 10,000-ton capacity foundry is being set up for heavy casting for the Railways.

Integral Coach Factory, Perambur—The State-owned Integral Coach Factory at Perambur in the north-west of Madras went into production in October 1955, for the manufacture of all-steel light-weight integral rail coaches. It was set up at a cost of Rs. 7.35 crores.

Diesel Locomotive Works—This project at Varanasi was sanctioned in August, 1961 with an estimated cost of Rs. 19.57 crores. In February 1962 a collaboration agreement was signed with ALCO of U.S.A. The capital lay-out envisages an annual production of 150 BG locomotives.

National Instruments, Calcutta—It was originally started as the Mathematical Instruments Office in 1830 for the repair and service of instruments used by the Survey of India. It was converted into a limited company on June 26, 1957 under the name of National Instruments Ltd. It manufactures various types of scientific and precision instruments including hydrometers, measuring cylinders, barometers, etc. An ophthalmic glass project is to be set up at Durgapur under National Instruments Ltd. Estimated to cost Rs. 4 crores with technical collaboration from USSR, this company has been transferred to the National Instruments Ltd. The Company made a net profit of Rs. 18.71 lakhs in 1963-64.

Bharat Heavy Electricals Ltd.—came into being as a separate company on November 13, 1964, as a consequence of bifurcating Heavy Electricals (India) Ltd. Bharat Heavy Electricals has been entrusted with the responsibility of administering and executing the following projects: (1) *High Pressure Boiler Plant, Tiruchirapalli, Madras*—is being set up with Czech assistance and is designed to produce 12 boilers for a total output of 750 MW, boiler fittings and package boiler units. The outlay of the factory will be Rs. 18.14 crores. Cumulative expenditure on this project as on March 31, 1964 was Rs. 6.35 crores. The construction work commenced in June 1963. On 12 June, 1964, an agreement was concluded with Messrs. Technoexpert, Prague, for the supply of detailed design and manufacturing documentation for the items to be manufactured in the plant. (2) *Heavy Power Equipment Plant, Ranchandrapuram, Andhra Pradesh*—is also being set up with Czech assistance. The plant is designed to manufacture 800 MW of steam turbine and turbo-alter-

nators per year in 1964 upto 100 MW units. The estimated cost of the plant is Rs. 27.47 crores. The cumulative investment upto March 1964 was Rs. 3.91 crores. The construction work started in August 1963. (3) *Heavy Electrical Equipment Plant, Hardwar, U.P.*—is being set up with Soviet assistance, and is designed to manufacture steam turbines and generators, water turbine and generators, medium and large size industrial electric motors. The estimated cost of the plant is Rs. 74.3 crores. The total investment upto March 1964 was Rs. 3.39 crores. In May 1964, contracts were signed with the Promesh Export, Moscow, for the entire supply of imported equipment of the value of Rs. 23 crores.

Heavy Electricals (India) Ltd.—was incorporated as a company on August 29, 1956. From November 13, 1964, Heavy Electricals Ltd. is only responsible to administer Bhopal unit, while the other three units at Tiruchirapalli, Ramchandrapuram and Hardwar have been put in charge of *Bharat Heavy Electricals Ltd.* Bhopal unit was established in technical collaboration with the Associated Electrical Industries Ltd., U.K. The factory at Bhopal went into production on July 1, 1960. The Company has an authorised capital of Rs. 50 crores.

Nahan Foundry Ltd., Sirmur, Himachal Pradesh—Originally established in 1872 as a private organisation, it came under the ownership of the Government of India in 1952. The administrative control of the Company has been transferred to the Himachal Pradesh Government with effect from 24th September, 1964. The Foundry manufactures mainly agricultural implements, such as cane-crushers.

Praga Tools Corporation Ltd., Hyderabad—was set up in 1948. The majority shares are held by the Union Government and the Andhra Pradesh Government. Against an authorised capital of Rs. 150.5 lakhs, the share capital holding of the Company as on March 31, 1964 was—Central Govt. Rs. 83.64 lakhs, Andhra Pradesh Govt. Rs. 47.57 lakhs and public Rs. 18.35 lakhs, and forfeited money was Rs. 0.98 lakhs. The Company manufactures machine tools and accessories, precision tools, auto and diesel parts, railway components, etc.

Hindustan Machine Tools Ltd., Jalahalli, Bangalore—was incorporated on February 7, 1953 for carrying on business and manufacturing of machine tools, small tools etc. in pursuance of the technical collaboration agreement entered into by Govt. of India with the firms of Oerlikon Machine Tool Works and Buehrle & Co., both of Switzerland, for setting up a machine tool factory in the country. Govt. of India bought over from Oerlikons their share capital in the Company in 1956. The Company signed an agreement in 1959 with a French firm for the production of centre height lathes. Another agreement was signed with Olivettes of Italy for the manufacture of 16 types of cylindrical grinding machine.

The Company has an authorised capital of Rs. 12 crores and subscribed and issued capital of Rs. 8 crores.

The Company's first factory at Bangalore went into production in October 1955. The factory produces lathes, milling machines, radial drills, grinding machines.

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The Company has another factory at Bangalore which was inaugurated on July 18, 1961. This factory was built and planned without any foreign technical assistance and with no foreign financial aid.

HMT has started manufacturing of watches in collaboration with a Japanese company in its second factory at Bangalore. The watch factory produced 1,67,306 watches (valued at Rs. 1.6 crore) in 1964. The first stock of watch came out of the factory in 1961.

The third factory was started in Punjab in Pinjore near Chandigarh in 1962-63. This factory was inaugurated in October 1963.

Fourth Machine Tools Factory has come up in 1964 at Kalamassari near Ernakulum, Kerala.

The fifth unit of the HMT was commissioned on December 27, 1965 at Kukkatpalli near Hyderabad. Construction work on this factory at a capital cost of Rs. 7.75 crores commenced in May 1964.

The net profit of HMT for 1964-65 amounted to Rs. 3.09 crores.

It turned out 2,170 machines in 1964-65.

Hindustan Cables Ltd., Rupnarainpur, West Bengal—was incorporated in August 1952 with the object of manufacturing telecommunication cables and accessories mostly required by the Posts & Telegraphs Department. The plant was set up in collaboration with Standard Telephones & Cables Ltd. at an estimated cost of Rs. 82 lakhs. Production started in 1960. The Company has an authorised capital of Rs. 3 crores, issued and paid-up capital on March 31, 1964 being Rs. 160.47 lakhs.

Shipping Corporation of India Ltd.—In 1961, Eastern Shipping Corporation and Western Shipping Corporation were amalgamated and formed into one company known as *Shipping Corporation of India*. This Corporation has been formed for increasing India's overseas shipping. The authorised capital of the Corporation is Rs. 35 crores. The tonnage of vessels owned by the Corporation is 2,36,586 GRT. Number and tonnage of vessels on order are 20 and 2,00,000 GRT respectively.

Hindustan Shipyard—The foundation stone of the Hindustan Shipyard at Visakhapatnam was laid on June 21, 1941. This shipyard was acquired by the Government of India from the Scindia Steamship Navigation Company in March 1952. The management is entrusted to the Hindustan Shipyard. The shipyard is now equipped with four large shipways and adequate workshops and jetty. It can build 4 diesel-propelled ships a year. The first ship built in the yard was launched on March 14, 1948. The authorised capital of the Company is Rs. 10 crores.

The second Shipyard is proposed to be built in Cochin with an initial ship-building capacity of Rs. 60,000 GRT per year.

The Hindustan Shipyard has so far built 33 ships. The shipyard yielded a net profit of over Rs. 56,000 in 1964-65.

Mogul Line Ltd.—Originally known as the Bombay and Persia Steam Navigation Co. Ltd., the company was registered in Bombay on 2 August, 1877. Its name was formally changed to Mogul Line Ltd. on 5 December, 1938. Turner, Morrison & Co. Ltd. took over the management of the company in 1913. On 15 August,

1960 it became a Government Company. The authorised capital of the Company is Rs. 2 crores.

Garden Reach Workshops Ltd.—was incorporated on 26 February, 1934 but was taken over by the Government of India on 19 April, 1960. The business of the Company is marine repair work in the Port of Calcutta. It also undertakes design and construction of coastal ships. It has an authorised capital of Rs. 3 crores.

Mazgaon Docks Ltd.—was incorporated on 26 February, 1934 and was taken over by Government of India on 19 April, 1960. The Company's main work is ship repairing, besides ship-building and general engineering work and manages the shipyards at Bombay and Goa. The Company has an authorised capital of Rs. 2 crores.

Machine Tools Prototype Factory—which was started at Ambar-nath (near Bombay) in April 1951, designs special type of tools and machines required for use by ordnance factories. A novel feature of the factory is a training school attached to it, which trains 100 skilled artisans every year.

Indian Telephone Industries Ltd.—The Government of India decided to set up a factory in collaboration with the Automatic Telephone & Electric Co., Ltd., U.K. An agreement was signed in May 1948. The factory was converted into a Private Limited Co. in February 1950. The Company was formed with a share capital of Rs. 200 lakhs which was increased to Rs. 400 lakhs in 1954 and again to Rs. 500 lakhs in 1964. The Government holds 90 p.c. of the shares, and the remaining shares are held by the Government of Mysore and the Automatic Telephone & Electric Co. Ltd., of England. The factory manufactures all types of telephone equipment and long-distance carrier equipment. The sales of the Company exceeded Rs. 10 crores in 1964-65.

Hindustan Insecticides Ltd.—which was established on April 1, 1954, is managing the two Government-owned DDT factories at Delhi and Alwaye. The Delhi factory is producing 1,400 tons of technical DDT per annum. It was established with the financial assistance from UNICEF and WHO. The Alwaye Factory (Kerala), with an annual capacity of 1,400 tons of technical DDT, has been established by the Government at a total cost of about Rs. 97.03 lakhs. It was set up in 1954 and went into production in 1958. It produced 1480.28 tonnes of technical DDT in 1964-65.

Pyrites and Chemicals Development Corporation Ltd.—set up in March 1960 in Sindri as a subsidiary of the National Industrial Development Corporation, it assumed independent status from September 16, 1963. In reality, it is a sulphuric acid plant based on pyrites. The Company has got two main projects at hand—Mining Project at Amjhore and Sulphuric Acid Plant at Sindri. The Company has an authorised capital of Rs. 5 crores.

Indian Drugs & Pharmaceuticals Ltd.—A company by this name was registered in New Delhi on April 5, 1961, to implement the four drug projects to be set up with the assistance of the USSR Government. Four drug projects are : (1) Anti-biotics at Rishikesh. (2) Synthetic Drugs at Hyderabad, (3) Surgical Instruments at Madras

and (4) Photo Chemicals at Kerala. A Unit of this Company, the Rs. 5.25-crore Surgical Instruments Plant at Nandambakkam near Madras was commissioned on September 1, 1965. With the Commissioning of a pilot plant of the Rs. 20-crore Russian-aided Synthetic Drugs Project at Kukkatpally, Hyderabad, on October 15, 1965, the project is positioned to go into actual production in 1966. This is one of the three units of the Indian Drugs and Pharmaceuticals Ltd. being put up in collaboration with Techno-Export of USSR. It is the biggest of the kind in Asia. It will have an annual production capacity of 850 tons of modern synthetic drugs of the sulpha group, anti-T.B. and anti-leprosy drugs, anti-pyretics and vitamins and 4,560 tons of intermediates from which these drugs will be manufactured. Of the intermediates 260 tons will be for sale. The total annual production of the project is estimated at Rs. 9 crores.

Hindustan Organic Chemicals Ltd.—This company was incorporated on December 12, 1960, for the manufacture of basic chemicals and intermediates in collaboration with a Consortium of West German Consultants. The plant is proposed to be located at Apta-Kharpada in Maharashtra. The authorised capital of the company is Rs. 12 crores.

Hindustan Antibiotics Ltd.—To meet the increasing demand for penicillin, the Government set up a factory at Pimpri (Maharashtra) with the help of UNICEF and WHO. It was set up in March 1954, with an authorised capital of Rs. 4 crores. Production began in August, 1955. The management of the factory is vested in the Hindustan Antibiotics Ltd.

A streptomycin plant, with a capacity of 40-45 tonnes per year, set up at Pimpri, went into production in 1963.

State Trading Corporation of India Ltd.—was set up in May 1956 and its principal endeavour is to diversify and supplement country's foreign trade. It plays an important role in promoting trade, particularly with East European countries including USSR. It has transacted direct trade worth Rs. 55.98 crores and indirect trade worth Rs. 41.79 crores, and made a net profit of Rs. 59.88 lakhs in 1963-64. The Corporation has an authorised capital of Rs. 5 crores.

Hindustan Photo Films Manufacturing Co. Ltd.—was registered in Madras on the 30th November, 1960 with an authorised capital of Rs. 8 crores, subsequently raised to 4.2 crores, for setting up at Ootacamund a plant for the manufacture of raw films for cinema industry, photographic papers and films and X-ray films in technical collaboration with a French firm. Another factory has been started at Ootacamund for the manufacture of various kinds of photographic materials in collaboration with a French firm. The Government of India entrusted the implementation of this project to Hindustan Photo Films Manufacturing Co. Ltd., Madras.

National Small Industries Corporation Ltd.—was set up in February, 1955. It renders valuable assistance to small-scale industries. One of its important functions is to supply them machinery on a hire-purchase basis (See also *Index*).

National Buildings Construction Corporation Ltd.—was set up in November, 1960. The authorised capital of the Corporation is Rs. 2 crores and the paid-up capital Rs. 117 lakhs. Loans totalling Rs. 121.50 lakhs have been sanctioned to the Corporation by the Government. The value of the contracts so far awarded to the Corporation amounts to about Rs. 19 crores. In 1963-64, the Corporation suffered a loss of Rs. 43.72 lakhs. The turnover in that year was Rs. 449.75 lakhs.

Hindustan Housing Factory Ltd.—This Factory was incorporated on January 27, 1953, as a private limited company with the Government of India and Basakha Singh-Wallenberg Ltd. The agreement with the private firm was terminated and the factory was taken over by the Government of India in August 1955. The authorised capital of the Company is Rs. 75 lakhs and paid-up capital Rs. 48.99 lakhs. The factory now manufactures transmission poles, street-light poles, industrial heavy beams, prefabricated roofs, doors, windows, foam concrete and partition blocks. It has produced prefabricated houses valued at Rs. 1.51 crore in 1963-64. It earned a profit of Rs. 5.11 lakhs for the same year.

National Projects Construction Corporation—is a Government concern incorporated on January 9, 1957, with an authorised capital of Rs. 59 lakhs to Rs. 135 lakhs. There are 12 shareholders—the Central Government and the Governments of Assam, Bihar, Gujarat, Jammu & Kashmir, Kerala, Madhya Pradesh, Mysore, Punjab, Rajasthan, Uttar Pradesh and West Bengal. It earned a profit of Rs. 38.59 lakhs in 1963-64. The Corporation is executing works on various river valley projects.

Instrumentation Ltd.—The implementation of two Precision Instruments Plants, one at Kota and the other at Kerala, with the technical and financial assistance of the Government of USSR has been assigned to the Instrumentation Ltd. which was incorporated on March 21, 1964 with its registered office at Kota. The Kota Plant will manufacture electronic and electro-magnetic instruments and is to be financed from the credit of 18 million Roubles (about Rs. 9.52 crores) under an agreement signed on the 29th May, 1959. The Kerala Plant is to be financed from the savings of the 112.5 million Roubles credit on November 1957, in accordance with the protocol signed in this regard in 25th May, 1963. The Plant will be located in the Palghat area and will manufacture mechanical, hydraulic and pneumatic instruments.

Hindustan Teleprinters Ltd.—was registered as a Joint Stock Company on December 14, 1960 with an authorised capital of Rs. 8 crores. The factory, which has its headquarters in Madras, has been set up for the manufacture of teleprinters and ancillary equipment in technical collaboration with Messrs. Ing. C. Olivetti & C., S.P.A., Italy. For the year ended 31st March, 1964, the Company suffered a loss of Rs. 3,79,797.

Handicrafts and Handlooms Exports Corporation of India Ltd.—It was originally known as Indian Handicrafts Development Corporation which was set up in 1958. The Company assumed its new

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name on June 1, 1962 when it became a subsidiary to the State Trading Corporation of India. It constitutes to direct its activities towards creating new markets and strengthening the established markets for Indian handicrafts for wide circulation in foreign markets. The Corporation has an authorised capital of Rs. 1 crore.

Indian Explosive Factory—The Government of India entered into an agreement with Imperial Chemical Industries to set up a factory for the manufacture of India's requirements of Industrial blasting explosives. The Government of India holds 20% of the equity capital and I.C.I., the remaining 80%. This factory was opened on the 5th November, 1958, at Gomia, Hazaribagh in Bihar.

Bharat Electronics Ltd. Jalahalli, Bangalore—The Government of India registered on April 21, 1954, Bharat Electronics (Private) Limited to set up a large-scale industry for the manufacture of wireless and electronic equipment, primarily for the defence services and civil departments of the Government. The factory has been started at Jalahalli (Bangalore). The factory began production in January, 1956. It is manufacturing tools and zigs. Against the authorised capital of Rs. 10 crores, the paid-up capital of the Company was Rs. 5.21 crores on March 31, 1964. It made a net profit of Rs. 59 lakhs in 1964-65. It produced in 1963-64 Rs. 6.21 crores worth of equipments and components. Since the commencement of production in 1956, the total value of production achieved up to March 1965 was Rs. 22.54 crores.

Hindustan Steel Ltd.—The iron & steel projects of the Government of India are under the united control of Hindustan Steel Ltd. HSL was incorporated on December 24, 1953, with an authorised capital of Rs. 100 crores (See also *Index*). (1) *Rourkela Steel Project* (Orissa)—An agreement was signed with Krupp-Demag Combine of Germany for financial and technical collaboration in the execution of 720,000-ton Rourkela Steel Plant in Orissa in 1953. Krupp-Demag gave technical assistance and trained Indian personnel. They invested in the capital of the Company. The Plant at Rourkela has been set up at a cost of Rs. 170 crore (See also *Index*). (2) *Bhilai Steel Project* (Madhya Pradesh)—An agreement was entered with the Soviet Government in February, 1955 for the erection at Bhilai of a modern integrated iron and steel plant with an initial capacity of 7,70,000 tons of saleable steel and 3,00,000 tons of foundry grade pig iron per year (See also *Index*). (3) *Durgapur Steel Project* (West Bengal)—The British Steel Consortium's project for Rs. one million steel plant at Durgapur, West Bengal, was signed by the Government of India in March, 1956. The factory is now fully started (See also *Index*). (4) *The Mysore Iron and Steel Works* which has been taken over by the Government of India is being expanded to produce 1,00,000 tons of steel per year (See also *Index*).

There were no organisational changes during 1964-65, except that the Fertilizer Plant at Rourkela was transferred back to the Hindustan Steel from May 1, 1964, and with the formation of Bokaro Steel Ltd., the Bokaro Steel Project unit of Hindustan Steel Ltd. is in the process of being wound up. During 1964-65, further amounts

were drawn from Government towards the subscribed share capital so that on December 31, 1964, the subscribed share capital of the Company stood at Rs. 5,100 million. The amount of loans drawn from Government remained unchanged at Rs. 3,571 million. The Hindustan Steel Limited earned Rs. 186.60 crores by selling iron and steel materials and by-products in 1963-64, an increase of Rs. 55.90 crores over the sales in the previous year. Exports of iron and steel materials were valued at Rs. 72.60 lakhs and those of by-products at Rs. 23 lakhs for the year.

The Hindustan Steel Ltd. is understood to have made a profit of Rs. 21 million for the year 1964-65.

Bokaro Steel Ltd.—A preliminary Project Report for the establishment of the Steel Works at Bokaro in Bihar was prepared in 1958 by Messrs. Dastur & Co., an Indian firm. In 1962, the U.S. Agency for International Development prepared a techno-economic survey on the establishment of steel works at Bokaro. A detailed Project Report was completed by Dastur & Co. in July, 1963. In May 1964, the Government of USSR agreed to finance the first stage of the project, i.e., to a capacity of 1.5 to 2 million tonnes of ingot steel per annum. Bokaro Steel Ltd. was incorporated on January 29, 1964, with an authorised capital of Rs. 100 crores. A team of Soviet specialists headed by the Director of 'Gipromex' came to India in August, 1964 for an on-the-spot study of the project. The team left for USSR after signing a project assignment on October 13, 1964. An Indo-USSR Agreement was signed on January 25, 1965 for co-operation in the construction of an integrated iron and steel works at Bokaro, with a capacity of 1.5 to 2 million tonnes with provision for expansion to 4 million tonnes. The Government of USSR are extending a credit up to 190 million roubles (about Rs. 100.5 crores) for meeting the foreign exchange cost of the plant (See also *Index*).

Neyveli Lignite Corporation Ltd.—was incorporated in November 1956. The Corporation has an authorised capital of Rs. 80 crores. This Project is an *integrated* one, because of its five-fold components—mining project, thermal plant, fertilizer plant, briquette-making plant and clay-washing plant.

Oil India (OIL) Ltd.—in which the Government of India and the Burmah Oil Company have equal shares, was incorporated in Assam on February 18, 1959, for the exploration and production of petroleum and crude oil (including natural gas) and for the construction of pipelines to the two refineries set up in the public sector with an authorised capital of Rs. 50 crores. The first stage of the 720-mile long pipeline from Naharkatiya to Noonmati was commissioned in March 1962. The section from Noonmati to Barauni is expected to be commissioned shortly.

Indian Oil Corporation Ltd.—Indian Oil Co., a marketing organisation and the Indian Refineries Ltd., a refining firm, both in the public sector, have merged to form Indian Oil Corporation Ltd. with a share capital of Rs. 75 crores in 1964. The new Corporation will have two divisions—refining and marketing, with headquarters in New Delhi and Bombay respectively.

Indian Motion Pictures Export Corporation—was set up on 19 September, 1963 with an initial share capital of Rs. 10 lakhs which has since been raised to Rs. 25 lakhs. It was registered on 12 March, 1964. The Corporation's main objective is to purchase, market, export and exhibit films (See also *Index*).

Ashoka Hotels Ltd., New Delhi—A public limited company wanted to start a big hotel in New Delhi but it could not raise the requisite finance. So ultimately in May 1956, the entire project was taken over by the Government of India which built a hotel known as Ashoka Hotel, and that started functioning from October, 1956. The authorised and paid-up capital of the Company is Rs. 1.50 crores. In 1963-64, the Company earned a net profit of Rs. 36.1 lakhs. The loan liability of the Company is Rs. 27 lakhs at the end of the year 1963-64.

Janpath Hotels Ltd.—was registered under the Companies Act, 1956, on the 25th September, 1963. The authorised capital of the Company was fixed at Rs. 1 crore. The new Company took over management of the Hotel on 1st April, 1964. Under the arrangements between the Government and the Company, the land and capital assets pertaining to Hotel Janpath were leased by the Government to the Company and the soft and wasteful assets were sold to the Company. The Hotel has 280 beds in 222 rooms. All the rooms are air-conditioned.

Bombay Uranium-Thorium Factory—The foundation stone of the factory was laid in January 1954. The cost of the factory is estimated to be Rs. 45 lakhs. It will produce 205 to 228 tons of thorium nitrate per annum. The factory will process indigenous uranium and thorium ores, as well as uranium-bearing residues of Indian Rare Earths.

Heavy Engineering Corporation Ltd.—was formed on December 31, 1958, at Ranchi. The Corporation was set up to develop manufacture of heavy capital equipment through (a) Heavy Machine Building Project, (b) Foundry Forge Project, (c) Heavy Machine Tools Project and (d) Coal Mining Machinery Project. The first three plants have been set up at Hatia near Ranchi and the fourth at Durgapur, which is now transferred to the newly-formed Mining and Allied Machinery Corporation, Durgapur. The total estimated cost of these projects is Rs. 195 crores, besides the cost of township estimated at Rs. 40 crores. Against the authorised capital of Rs. 100 crores the Union Government had subscribed Rs. 81.65 crores by March 31, 1964.

National Coal Development Corporation—was set up in Oct., 1956 with its registered office at Ranchi to look after the production of coal in public sector. The Company has an authorised capital of Rs. 50 crores. The Company has been formed to own and manage the existing State collieries as well as the new collieries to be established. There are 11 collieries, excluding Singareni Collieries in Andhra Pradesh. A coal-washing plant for the supply of coaking coal to the Bhilai and Rourkela steel plants was set up at Kargali (Bihar) in November 1958, which functions under NCDC.

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National Mineral Development Corporation Ltd.—was incorporated on 15 November, 1958. The authorised capital of the Company is Rs. 15 crores. It has been entrusted with the execution of the following schemes— (1) Kiriburu Iron Ore Project, Bihar; (2) Bailadila Iron Ore Project, M.P.; (3) Redi Iron Ore Project, Maharashtra; (4) Khetri Copper Project, Rajasthan; (5) Panna Diamond Mining Project, M.P. and (6) Dariboo Copper Project.

Indian Rare Earths Ltd.—was set up in August 1950, jointly by the Governments of India and Kerala with an authorised capital of Rs. 1 crore. The Monazite Factory at Alwaye in Kerala was formally opened in December 1952. This factory is designed to treat 1,500 tons of monazite per year and to produce therefrom about 1,500 tons of rare earth and also carbonate and sodium phosphate.

Travancore Minerals Ltd.—was registered on December 30, 1956 jointly by the Governments of India and Kerala for taking over all sand separation undertakings from a previous company. The authorised capital of the Company is Rs. 1 crore.

Hindustan Salts Ltd.—This Company was set up by the Government of India at Jaipur in April, 1958 to take over the Government Salt Works at Sambhar Lake (Rajasthan), Kharaghoda (Gujarat) and Didwana. The authorised capital of the Company is Rs. 2 crores, out of which Rs. 1,67,25,000 has been subscribed so far. A new Company under the name and style of *Sambhar Salts Ltd.* has been registered on the 30th September, 1964 as a subsidiary of the Hindustan Salts Ltd.

Orissa Mining Corporation Ltd.—This Company was set up in May 1956 as a joint venture of the Governments of India and Orissa. The main object of the Company is to raise, assemble and transport iron and other minerals in Orissa for the purpose of sale or export or for undertaking other responsibilities conducive to the attainment of the above objects.

National Newsprint and Paper Mills Ltd.—It is situated at Nepanagar (M.P.). Popularly known as Nepa Mills, it was formed as a private enterprise in 1947. Due to losses for various reasons, the mill passed into the hands of the Government of Madhya Pradesh in 1949. Later in 1958, the Government of India took over the majority shareholding of the Company. It has an authorised capital of Rs. 5 crores. The mill went into production in January 1955. It has an installed capacity for 30,000 tonnes annually. During 1964-65, production of newsprint amounted to 30,530 tonnes.

Indian Engineers Ltd.—A new company has been set up to undertake the designing, construction and management of industrial projects in both the public and the private sectors. It is a joint venture of the Government of India and Bachtel International Corporation of U.S.A. The authorised capital of the Company will be Rs. 2 crores and the initial issued capital will be Rs. 25 lakhs. The Government of India will have 51 per cent share in this Company and the remaining 49 per cent will be held by Bachtel International Corporation of U.S.A. The Indian Engineers Ltd. will provide engineering service in the development of petroleum, petro-chemical and other industrial

programmes in the country.

Bharat Earth Movers Ltd.—was set up at Bangalore on May 11, 1964 in the public sector. Controlled by the Defence Ministry, it will establish a factory at a cost of Rs. 11 crores, to manufacture various types of earth-moving equipment in collaboration with an American firm, Le-Tourneau Westinghouse Company of Peroria.

Cement Corporation of India Pvt. Ltd.—came into being on January 18, 1965. This is a major step to promote the growth of cement industry in India. The Corporation is fully owned by the Government of India. The Corporation will address itself to the task of intensive prospecting and proving of limestone deposits. It will act as a store-house of information on the cement grade limestone deposits in the country. It will set up two new cement plants—one in Bastar district of Madhya Pradesh (capacity 10 lakh tonnes a year) and another in Cuddapah district of Andhra Pradesh (capacity 2 lakh tonnes a year).

DESCRIPTION OF INDUSTRIES

TEXTILES—It occupies the foremost place among the organised industries of India. Bombay, Ahmedabad, Sholapur, Kanpur, Nagpur, Indore, Madurai and Coimbatore are the main centres of this industry.

ENGINEERING—So far as engineering industry is concerned India has become self-sufficient in a variety of articles like electric motors, batteries, ceiling fans and metal sheets for utensils. Machine-building industries as well as other engineering industries are recording increased production.

The total value of exports of engineering goods, including rolled steel, from India in 1964-65 touched Rs. 19.5 crores. The export of rolled steel in 1964-65 was worth about Rs. 2.75 crores.

JUTE—As the biggest earner of foreign exchange for India, jute industry occupies an important place in the country's economy. Partition of the country hit this industry hard but strenuous efforts have enabled the industry to rise again. There are more than a hundred jute mills in India, which employ about 300,000 workers. To encourage modernisation, licences for the import of machinery have been liberally granted to the jute mills and a start made in the manufacture of jute mill machinery in the country.

At present, the mills concentrate on producing mainly (1) *gunny bags* or *cloth* used for packing rice, wheat, oilseeds, etc.; (2) *hessian cloth* or *bags* used for bailing cotton, wool and other fibres; (3) *coarse carpets* and *rugs* (4) *cordage*, (5) *jute tarpaulins*, (6) *paper-lined hessian*, *jute carpets* and *jute webbing*.

Export of jute goods increased by Rs. 40 crores in the past five years—from Rs. 140 crores in 1960-61 to Rs. 180 crores in 1965-66.

ALUMINIUM—The aluminium industry in India comprises the manufacturing as well as fabricating units. The industry producing virgin aluminium metal came into being in India only during the last World War. Production of aluminium in India began in a small way around 1943. The pioneer concerns producing aluminium are *Aluminium Corporation of India Ltd.*, and the *Indian Aluminium*

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Company Ltd. The former is the first Indian firm to produce aluminium. It was set up in 1937 and started production of aluminium in 1942. The Corporation has its mines in Lohardaga, Bihar and its refining plant, reduction works, power plant and rolling mill in Jaykaynagar near Asansol (W. Bengal). The *Indian Aluminium Company Ltd.*, a subsidiary of Canadian Aluminium Ltd., was set up in 1938 under the name of Aluminium Production Co. of India Ltd. The firm started fabrication of sheets and circles from imported aluminium ingots at Belur (W. Bengal) in 1941. Another plant of the firm was set up at Alwaye (Kerala). Hirakud smelter of this firm went into production in 1959. The production of aluminium from indigenous bauxite was taken up by the Company's plant at Muri (Bihar) in 1948.

The main plants today are all in the private sector. They are at Hirakud (20,000 tonnes), Renukoot near Rihand (20,000 tonnes), Asansol (7,500 tonnes), Alwaye (5,600 tonnes) and Mettur (10,000 tonnes). The Rihand plant of *Hindustan Aluminium Corporation* is being expanded to 60,000 tonnes. A public sector plant is being set up at Koyna in Maharashtra with help from West Germany.

The Government of India approved on November 2, 1965 the formation of a company in the public sector under the name of *Bharat Aluminium Company Ltd.*, to construct, manage and operate the Koyna and Korba aluminium projects. It was also decided that the Secretary, Department of Mines and Metals would be the Chairman of the new Company in the initial stages when negotiations have to be conducted at Government level, particularly in regard to assistance from Hungary and the USSR. It is proposed to sign very soon a consultancy agreement with Messrs. Vereinigte Aluminium Werke (V.A.W.) of West Germany, for the Koyna aluminium project. This collaboration is for technical consultancy on the basis of payment of fees for services rendered.

LIGHT MECHANICALS—They include ball-bearings, duplicators, sewing machines, typewriters, conveyor beltings and zip fastners. They have made substantial increase in production.

ELECTRICAL ENGINEERING—Commendable increase in production was made in items like electric lamps, miniature lamps, fluorescent tubes, electric fans, radio receivers, storage batteries, dry batteries, house services meters, room air-conditioners, domestic refrigerators and measuring instruments.

SUGAR—India is the largest sugar-producing country in the world. The per-acre yield in India—14 to 15 tons, compares most unfavourably with the yields of 62 tons in Hawaii and 56 tons in Indonesia. The important cane-growing and sugar-producing States are Uttar Pradesh, Bihar, Punjab, Maharashtra, Andhra and Madras. The first two alone contribute more than 70 p.c. of the total production. Approximately 55 p.c. of the total cane produced in India is utilised for *Gur* and *Khandasari*. Only 25 p.c. goes to the mills for the manufacture of crystal sugar. It is India's second largest industry, next only to textile.

Indian sugar is of three forms—*jaggery*, *khandsari* and *white sugar*. Of these, the simplest is *jaggery*, being merely cane-juice boiled and solidified. *Khandsari* sugar is made through an indigenous process by the molasses being separated from sucrose. *White sugar* is directly produced in the factories in India.

The responsibility of sugarcane research rests mainly on the *Indian Central Sugarcane Committee*. A chain of sugarcane research stations have been established in various States. The establishment in 1936 of the *Indian Institute of Sugar Technology* at Kanpur is a great contribution to the cause of sugar industry.

The three main by-products of sugar industry—*bogasse*, *pressmud* and *molasses*—are used as raw materials by a number of industries. *Bogasse* is widely employed in the manufacture of paper pulp and card board. Considerable work is being done in respect of extraction of wax from *pressmud*. Similarly, *molasses* is used in the manufacture of acetic acid, industrial and power alcohol, chemicals, tobacco curing, etc.

Sugar production in India's co-operative sector went up by more than a third in 1964-65 to touch the all-time record of 806,000 tonnes. Thus the 50 co-operative sugar factories accounted for a quarter of the country's total output of 32.60 lakh tonnes.

PLYWOOD—This industry is meeting the entire demand of the country for (1) flush doors, (2) black-board, (3) commercial plywood, (4) packing plywood, (5) tea-chest plywood, (6) marine plywood, and (7) concrete shuttering plywood.

CYCLE—Records indicate that first bicycle made its appearance in India in 1890. The indigenous industry was sponsored first in 1925 in Madras with German technical assistance but their efforts proved abortive. Between 1938 and 1941 three manufacturing concerns were started, viz, India Cycle Manufacturing Co., Calcutta; Hindustan Bicycle Manufacturing Co., Patna; and Hind Cycles, Bombay. In 1949, the Government of India gave permission to establish manufacturing plants to three new units—(1) Sen-Raleigh Industries which secured technical collaboration from Raleigh Industries; (2) T. I. Cycles of India with technical co-operation from Tube Investment Ltd. and Hercules Cycles & Motor Co., of England; and (3) Atlas Cycle Industries.

PAPER AND PAPER BOARDS—The beginning of modern paper industry in India dates back to 1830 when the first paper machine was established in Calcutta by Dr. Carey in West Bengal. This venture failed and the machine was transferred in 1870 to Royal Paper Mills at Bally in Howrah district, which was started in 1867. The Upper India Paper Mills, Lucknow and Titaghur Paper Mills, Calcutta were started in 1882 and 1884 respectively. Both of these began using *moonj* and *sabai* grass. Deccan Paper Mills was set up at Poona in 1887 and Bengal Paper Mills at Raniganj in 1891. Protection was granted to the industry in 1925 and was renewed periodically until its withdrawal in 1947. During World War II, the number of paper mills increased to 15, when production recorded 1,03,884 lakh tons (1944). The first newsprint mill,

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National Newsprint and Paper Mills at Nepanagar (M. P.), went into production in January 1955. It has an installed capacity of 30,000 tonnes per year. (See also *Index*).

India's biggest paper mill has gone into production in May, 1965 at Amla in M. P. Built in the private sector at a cost of Rs. 17 crore, the mill will produce 2,000 tonnes of paper daily.

There are 53 paper and paperboard mills in production in India with a production capacity of 643,870 tonnes and with a licensed expansion of 227,516 tonnes. Besides, ten new large units have been licensed or approved with a total capacity of 244, 200 tonnes. The total production of paper and paperboard for the year ending March 31, 1965 was 439,000 tons.

A large factory for producing 60,000 tonnes of newsprint annually is to be set up in the public sector. Besides, four units with a total annual capacity of 155,000 tonnes will be set up in the private sector. The capacity of the Nepa mills is to be increased to 45,000 tonnes from the existing 30,000 tonnes. Between August 1964 and August 1965 about 33,417 tonnes of newsprint was produced in India and between August 1, 1964, and June 30, 1965, about 92,357 tonnes of newsprint were imported. The total imports of different categories of paper during 1964-65 came to Rs. 5.15 crores.

LEATHER, HIDES AND SKINS—Leather industry in India ranks probably fourth in importance as an earner of foreign exchange. Uttar Pradesh is the biggest producer in the country with 92.33 lakh pieces of skins and hides per year. It is followed by Maharashtra, Madhya Pradesh, Andhra Pradesh, Rajasthan and Madras.

By far the largest utilisation of leather is in the production of footwear. Footwear produced in this country may briefly be classified into two categories: (1) Western types, (2) Indian types. The industry is organised mainly on a small scale, although there are a few big tanneries in Madras, Kanpur, Calcutta and Bombay. There are at present about 725 tanneries in the country.

TANNING—with a cattle population of about 20 crores, which is nearly three times than that of U.S.A., India produces about 2 crores of cattle hides per year. In addition, there are about 7.5 crores of goats and 4 crores of sheep, producing about 3.5 crores of goat skins and 1.7 crores of sheep skins per year. Tanning industry is organised mainly on a small-scale basis. For the facilities of training, in addition to the regional tanning institutes functioning at Bombay, Madras, Calcutta and Jullundur, a *Central Leather Research Institute* was established in Madras in January, 1953. The *Leather School of Kanpur* is a Government institute offering facilities for higher technical training.

SCIENTIFIC AND MEDICAL INSTRUMENTS—There are at present 49 units engaged in the manufacture of scientific, drawing, surveying, mathematical and industrial instruments and 5 units in X-ray and electro-medical instruments.

RAYON—This industry was started in India after the war in 1950. Total production of rayon yarn in 1962 is estimated at about

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27 million kgs. The first mill which was started in India, was *Travancore Rayon Ltd.* in 1950. Viscose rayons today remains the lowest-priced synthetic and has been accepted widely in all fields of textile interest. The main raw materials for production are sulphuric acid and rayon grade caustic soda which are now being produced in India.

SILK—This industry in India, which dates from ancient times, was at one time of very great importance but it was a decaying industry afterwards. The World War II proved grand incentive to its revival. Sericulture industry occupies a prominent place among the village and small-scale industries in India. Nearly half the quantity of raw silk is produced in Mysore followed by Assam, West Bengal, Madras, Jammu and Kashmir.

Non-mulberry raw silk is used almost wholly for civilian fabrication purposes, whereas mulberry raw silk has vital importance in defence services of the country as dropping silk parachutes.

The Government of India have been giving tariff protection to sericulture industry since 1930. For the development of sericulture and silk industry, a *Central Silk Board* was established in 1949 under the *Central Silk Board Act LX of 1958*.

Central Silkworm Station, Srinagar, was established in 1958 for dispensing with the needs for imports from abroad. The *Central Sericultural Research Station* was established at Berhampore (W. Bengal) in 1943, with a sub-station at Kalimpong. It conducts experiments and research development in the various branches of sericulture. There is an *All-India Sericultural Training Institute* in Mysore for giving practical as well as theoretical training in sericulture.

India exported pure silk fabrics valued at Rs. 2.23 crores in 1964. Tasar fabrics worth Rs. 8.5 million were exported during same year.

INDUSTRIAL GASES—The production of oxygen gas and dissolved acetylene gas registered a considerable increase. There has been a sharp increase in the production of nitrogen. The production of carbon dioxide increased by about 7 p.c.

INDUSTRIAL EXPLOSIVES—The production of industrial explosives (non-permitted type) and safety fuse has been adequate for meeting the entire requirement of the country.

SEWING MACHINES—The first factory for the production of sewing machines in India was started in 1937. The real growth of the industry began after the World War II. By 1951 production in the main factories was over 44,000 machines per year. A noteworthy feature of the industry is that all component parts are now made in the country. The exports of these India-made machines are gradually increasing and imports are considerably decreasing every year.

WOOL INDUSTRY—India produces about million pounds of wool annually. The major portion of the clip is hairy and coarse and includes a considerable quantity of coloured produce. The yield of wool varies from three-fourths of a pound to four pounds per sheep per year.

The woollen hosiery industry in India consists of small-scale units, the bulk of them are located at Ludhiana and the remainder

dispersed over Uttar Pradesh, West Bengal, Delhi and Maharashtra. Woollen textiles are only a part of the entire wool industry. The other important sectors are carpets and woollen hosiery. Other types of coarse products made of wool are rough blankets, towels, fur-coats and bundies, felt and hair belting for machinery.

CARPETS—Carpets are India's best products in wool. Carpet-making is an organised industry. The main centres of production are Amritsar, Agra, Gwalior and Jaipur for better classes of carpets; Kashmir for cheap qualities; and Mysore, Bellary, Bangalore and other places in the South for druggets.

CEMENT—The manufacture of portland cement in India began in 1904 in Madras State but the project failed. Nine years later, a small factory was started at Porbandar and soon after, factories were built in Lakheri and Katni. The Indian Cement Manufacturers' Association was formed in 1926. In 1927, the Concrete Association of India was formed to popularise the use of cement and in 1930, the Cement Marketing Company of India was formed to take over the sale of the output of member companies. There are at present 35 factories in India which produce about one crore tons of cement annually. The *Cement (Quality Control) Order* was issued in 1962 to prevent possible adulteration of cement.

With effect from 1 January, 1966 all Central and State controls on cement was withdrawn and consequently the system of allocations by the S.T.C. and issue of permits by the State controllers ceased.

CERAMICS—are said to be the oldest of industries, and also an ancient art in India. There are now some 53 ceramic factories in India, including those producing insulators. There has been much progress in the production of ceramics, notably in the field of white wares, sanitary wares, glazed tiles and high-tension insulators. These are located over a fairly wide area but the majority of them mainly centre round Madhya Pradesh, West Bengal, Maharashtra, Madras and Mysore.

RUBBER GOODS—manufacturing industry in India has been able to achieve self-sufficiency in respect of practically all the important items made out of rubber. Apart from 400 smaller units, there are at present 89 organised units in the manufacture of wide range of rubber goods.

In India, beginnings of the rubber industry can be traced back to 1920 when a general rubber goods factory was established in Calcutta for the manufacture of moulded goods. Manufacture of tyres and tubes which accounts for nearly 65 to 75 p.c. of the total consumption of raw rubber, commenced in India in 1936 when a factory at Sahaganj in W. Bengal went into production. Raw rubber is the principal raw material used by the rubber industry.

The rubber goods manufacturing industry in India covers the manufacture of 130 diverse items. About 85 p.c. of the raw rubber is consumed by the three important items, namely, automobile tyres and tubes, bicycle tyres and tubes and rubber footwear. At present there are 6 automobile tyre units, namely, Dunlop Rubber Co., Firestone Tyre and Rubber Co., Ceat Tyre of India, Goodyear India,

Madras Rubber Factory and Premier Rubber & Cable Industries of India. Apart from these major units, more than 50 large units are also distributed in the various parts of the country.

MATCH—Match-manufacturing hardly existed in this country before the World War I. A considerable expansion of the industry was, however, made after the imposition in 1922 of a revenue duty on imports, which was converted in 1928 into a protective duty. The effect was so conspicuous that the foreign exporters ceased to export and a big Swedish match combine came to India and established many factories at Bareilly, Ambarnath, Calcutta and Madras, under the name and style of the Western India Match Co. Ltd.

At present there are 62 match factories registered under the Industries (Development and Regulation) Act. Except for sulphur and phosphorous, the other raw materials for this industry are now available indigenously.

GLASS—Glass-manufacturing forms an important industry in India. The number of registered glass factories in 1959 was 123 with an aggregate capacity of 392,284 tons per year. The figure does not include an annual output of 35,000 tons for bondage industry. Most of the glass factories are located in West Bengal, Maharashtra and U.P. The total capital investment in these 123 units is Rs. 12 crores. These factories produce glassware valued at Rs. 18 crores. Very recently blown glass, fibre glass and optical glass have begun to be produced in India. The progress India has made in glass technology in last 10 years is largely due to the researches conducted at the *Central Glass and Ceramic Research Institute, Calcutta*.

SOAPS—There are 91 organised units manufacturing soaps in the country, besides many smaller and cottage units. Nearly one-third of the organised units are in Maharashtra. West Bengal stands second with 21 units. The raw materials that go into production of soap are vegetable oils and tallow (including rosin), caustic soda, sodium silicate and perfumery.

AUTOMOBILE INDUSTRY—The first motor car was imported into the country in 1898.

The year 1954 was an important landmark in the development of motor industry in India. The Government of India took the bold decision of restricting the manufacture and assembling of automobiles to only a few recognised concerns that proved their *bona fide* by agreeing to a definite phased programme of development with the ultimate objective of reaching the stage of complete manufacture of all the important components.

There are at present 6 approved manufacturers for automobiles in the country. They are, viz., Hindustan Motors, Calcutta; Premier Automobiles, Bombay; Mahindra and Mahindra, Bombay; Ashoke Leyland, Madras; Standard Motor Products, Madras; and Tata Locomotive and Engineering Co., Bombay. Two automobile diesel engine manufacturers, Simpson & Co. and Automobile Products of India, were approved of in 1955. On the recommendation of the Tariff Board, the Government has given protection for a period of 10 years.

The production of cars in 1964 was 23,226. The production of scooters in 1964 was 37,193. In addition, 33,472 lorries and 10,436 jeeps were produced during the same year.

PLASTICS—The plastics industry is comparatively new in India. Rapid progress has been made in the plastics industry. India is now in a position to export plastics goods. There is *Plastics and Linoleum Export Promotion Council*. The plastics industry in the country is now producing raw materials and processed goods. All types of moulded plastics goods are being produced to meet the growing demand for consumer goods industrial components.

The current production of plastics is around 30,000 tonnes a year.

TOBACCO—India is the third largest tobacco-producing country in the world. As a cash crop, tobacco brings an annual income of Rs. 50 crores and fetches about Rs. 1 crore of foreign exchange to the country. The Government earns Rs. 50 crores annually by way of excise duty, agricultural cess and customs revenue. Andhra Pradesh and Maharashtra occupy dominant position in tobacco industry; Andhra's share being about 35 p.c. and that of Maharashtra about 25 p.c. About 90 p.c. of the exports are made up of cigarette tobacco. The Government of India constituted in 1945 an autonomous body. *Indian Central Tobacco Committee*.

COIR—Coir means fibre extracted from husks of a coconut. India is the world's chief producer of coir. India is the sole producer of coir yarn and mats and mattings and carpets from coir. The coir industry is concentrated in Kerala and employs 6 lakhs of workers now. Coir industry has been diversified and mechanised. 8 Rubberised Coir Mat Plants have been set up for producing rubberised coir upholstery and packing material for delicate instruments and they are distributed in the States of West Bengal, Madras, Kerala, Mysore, Orissa and Punjab. The largest factory is situated at Konnagar in West Bengal. Two principal types of coir fibre are the *mat fibre* and *curled fibre*. The bulk of the output consists of mat fibre. A research institute at Kalavoor, near Alleppey (Kerala) and a branch research institute and model factory at Uluberia in Howrah district of W. Bengal have been set up.

A *Coir Board* was established under the Coir Industry Act, 1953. The development of coir industry is the responsibility of the Coir Board. It levies a customs duty not exceeding Re. 1 per cwt. on all coir fibre, coir yarn and coir products exported from India.

SPORT GOODS—At present, sport goods industry is predominantly concentrated in the northern region of the country, specially at Jullundur and Meerut. Other centres of this industry in the northern region are Delhi, Batala and Patiala (Punjab), Agra, Lucknow and Allahabad (U.P.), and Jammu & Kashmir. The raw materials for these goods are willow and mulberry wood, which are produced in Kashmir and in other parts of the country. The manufacture of sport goods is a cottage industry.

BISCUITS—The country produces all her requirements of biscuits and confectionery. In the organized sector there are 40 fac-

factories capable of producing 30,000 tons of biscuits a year. As for confectionery, the organised sector consists of 44 factories with a production capacity of 50,000 tons a year. Recent shortage of wheat and sugar has hit the industry considerably.

LAC—It is the secretion of an insect which feeds on the sap of certain trees known as lac-hosts. The main lac-hosts in W. Bengal are *palas*, *ber* and *kusum*. The leading lac-producing States in India are Bihar, Madhya Pradesh and West Bengal, portion of Maharashtra, Orissa and Assam. In West Bengal, it is mainly grown in Murshidabad, Malda, Bankura and Purulia districts. The lac, secreted from the glands of the lac insects, is converted into sticklac. This sticklac is processed into shellac, by either indigenous method or hydraulic pressure method or Soviet process method. The principal uses of the processed products of stick and shellac are in the following industries : gramophone records, varnishes and polishes, electrical industries, hats, printing and paper, sealing wax, cement and adhesives, etc. The research is being carried on by the *Indian Research Institute* at Namkum (Ranchi).

VANASPATI INDUSTRY—was first introduced into India after the World War I by imports from Europe. The first vanaspati factory in India was established in 1930. The Government helped the industry by giving it protection. Vanaspati is mainly made from groundnut oil and also from cotton-seed oil. In 1944, the Government of India introduced legislation to control the industry appointing an officer of the Vegetable Oil Products Control Order. Under the regulation, quality has been standardised and new factories have to obtain permits before starting production.

PRODUCTION OF INDUSTRIES, 1964

Name of the Industry	No. of Units	Estimated Production
Sugar Mill Machinery	17	714.88
Cement Mill Machinery	6	216.49
Printing Machinery	4	2.09
Tea Machinery	12	131.29
Coal Mining & Coal Washery	12	59.75
Paper & Pulp Machinery	14	172.55
Agricultural Machinery	26	226.68
Steel Pipes and tubes	13	2,15,363
Railway Wagons	15	23,616
Steel Castings	22	73,090
Electric Motors	27	13,18,200
Transformers	19	31,26,000
Machine Tools	59	1,822.52
Wood Working Machines	3	2.52
Automobiles :		
(i) Com. Veh	5	33,777

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(ii) Cars	3	21,637
(iii) Jeeps	1	11,327
(iv) Scooters	3	18,716
(v) Motor Cycles	3	12,316
Tractors (Agri.)	4	2,212

PLANTATION INDUSTRIES

PLANTATIONS IN INDIA—Tea, coffee and rubber plantations together cover about 6.4 p.c. of the cropped area and are concentrated mainly in the north-east and along the south-west coast. They provide employment to over 12 lakh persons. India earns from the export of tea foreign exchange amounting to Rs. 100 crores a year.

TEA—Between 1834 and 1865 tea was cultivated in Government plantations. Since 1865, tea plantation was mainly financed and managed by European business firms. The area under cultivation in 1960 was 331,090 hectares (0.40 hectare=1 acre). Tea plantations number more than 8,000. Tea ranks after jute as the largest item in India's export trade. Northern India accounts for 80 p.c. of the total Indian production. The tea plantations of South India are distributed among four states—Madras, Kerala, Mysore and Coorg. But the State of Assam in Eastern India has the highest concentration of plantation (49 p.c. of the total area including the north & the south). There is a *Tea Board* which administers Tea Act of 1953. The Board is also responsible for the regulation and control of the sale of tea by auctions or otherwise, registration and licensing of brokers and blenders and the quality control. It is financed by a cess collected by the export of tea.

COFFEE—is one of the major plantation industries of India. Practically all coffee is grown in South India in the States of Kerala, Mysore and Madras; only a small quantity being grown in Bihar. The main species of coffee grown in India are *Coffee Arabica* noted for its quality and *Coffee Robusta* which has better resistance to pests and diseases, yields more and is cheaper to produce. The cultivation of *Leberia Coffee* is negligible. The major part of the acreage under coffee, 75 p.c. approximately, is claimed by *Arabica* variety. Under the Indian Coffee Marketing Expansion Act, *Indian Coffee Board* has been constituted which is responsible for evolving a system of regulated and co-operative marketing of coffee. Cultivation of coffee dates from 1830. Under the International Coffee Agreement of 1962, India has been allotted an annual basic export quota of 21,600 tonnes for three years beginning from October 1962.

RUBBER—Chief raw materials for rubber goods are natural rubber, synthetic rubber, reclaim rubber, rayon cord, carbon black, rubber chemicals, etc. About 50 p.c. of the total requirements of natural rubber is at present being met from indigenous production in South India and balance is being imported to limited extent. Plantation of rubber is of comparatively recent origin. The consumption of rubber in 1964 was of the order of 80,000 tonnes. Tyres and tubes account for over 65 p.c. of the overall use of rubber.

INDIA'S TEN BIG INDUSTRIAL CONCERNS

The following are the companies whose assets are over Rs. 50 crores each : (1) *Hindustan Steel Ltd.*—Rs. 798.60 crores ; (2) *Tata Iron & Steel Co.*—Rs. 155.18 crores ; (3) *Indian Iron & Steel Co.*—Rs. 99.85 crores ; (4) *Neyveli Lignite Corporation*—Rs. 96.99 crores ; (5) *Fertilizer Corporation*—Rs. 84.81 crores ; (6) *Oil India Ltd.*—Rs. 76.55 crores ; (7) *National Coal Development Corporation*—Rs. 71.96 crores ; (8) *Indian Oil Corporation*—Rs. 66.88 crores ; (9) *Heavy Electricals Ltd.*—Rs. 51.15 crores ; (10) *Associated Cement Companies*—Rs. 50.21 crores.

Among the aforesaid ten companies, Nos. 2, 3 and 10 are in the private sector and the remaining seven are in the public sector.

SAMLL-SCALE INDUSTRIES

PATTERN OF SMALL-SCALE INDUSTRIES—The small-scale and cottage industries in our country are in many cases functioning as independent and isolated units without the aid of any mechanical or electrical appliances. Most of them do not yet possess any adequate assistance either in production methods or in sales organisation. The inherited skill of the artisans appears to be the main factor, which is now largely responsible in many cases to sustain these industries at the present moment. It is estimated that about 2 crore persons are engaged in cottage industries. The handloom industry alone employs 50 lakh people.

The development of industries, more particularly cottage and small-scale industries, is the primary responsibility of the State Governments. According to the Industrial Policy Resolution of the Government of India, dated April 6, 1948, the development of some large-scale industries and the co-ordination of cottage and small-scale industries have been recognised to be a part of the Central Government's responsibility. The Planning Commission has not only endorsed the above recognition, but also has laid down the sphere of responsibility of the Central Government in respect of cottage industries.

To supplement the efforts of the State Governments, the Central Government have set up the following bodies—*All India Khadi and Village Industries' Commission*. *All India Handicrafts Board*. *All India Handloom Board*. *Small-Scale Industries Board*, *Coir Board* and *Central Silk Board*. Financial assistance to small industries given by the Government, State Financial Corporations and banking institutions including State Bank of India is as follows :— (1) Financial assistance to small industries, (2) Sanction for the establishment of industrial estates, (3) Industrial Extension Service for technical assistance to small industries, (4) Establishment of National Small Industries Corporation, 1955, (5) All India Handicrafts Board has been established for improvement of production and marketing of handicrafts in India and abroad.

The Government are also making special efforts to encourage

industrial co-operatives, which now form over 10 p.c. of the total number of co-operative societies.

The definition of small-scale industries includes all industrial units with a capital of not more than 5 lakhs of rupees, irrespective of the number of employees.

The Central Government gave loans totalling Rs. 12.93 crores to the State Governments from 1955 to June, 1962 for establishing *Industrial Estates* which seek to remove small industrial units from urban areas and provide them new sites with factory space and common facilities for efficient working. By the end of June, 1963, of the 115 Industrial Estates completed, 84 were functioning.

A programme of technical assistance to small industries, known as the *Industrial Extension Service* has been undertaken directly by the Central Government, 16 small industries service institutes, 5 branch institutes, and 64 extension/production centres have been set up. The Service provides economic information and training facilities.

Industrial Co-operatives—The Government are continuing their special efforts to encourage co-operatives in launching new industries, particularly in the village and small industries sector.

Invention Promotion Board which is entrusted with the promotion of the inventive spirit amongst independent workers, artisans and technicians has been successfully functioning.

Another significant development was the establishment of the *National Small Industries Corporation* (See also *Index*) in February, 1955. The Corporation started with an authorised capital of Rs. 10 lakhs which was later increased to Rs. 50 lakhs. One of its important functions is to supply to small-scale industries the machinery and equipment on a hire-purchase system. The total units registered for supply of stores against Government orders is 13,575.

All-India Handicrafts Board was set up in 1952 to improve production and marketing of handicrafts in India. The Board is running 15 pilot centres. There are also 4 design centres and 4 regional offices to provide assistance in designing and other activities. About 150 emporia have been set up all over India for effective marketing of handicrafts. The salient features of the Board are (1) Marketing; (2) Quality Control; (3) Publicity; (4) Design-development; (5) Planning and Research.

Publicity abroad through exhibitions and other media is being conducted by the *Handicrafts and Handloom Export Corporation*.

Coir Industry is mainly carried on in cottage industry basis, though small factories employ wooden looms worked by manual labour. Of the estimated annual production of 1.42 lakh tonnes of coir yarn, more than 90 p.c. is produced in Kerala. The *Coir Board* is engaged in popularising and promoting coir products in India and abroad. A research institute at Kalavoor near Alleppey (Kerala) and a regional research station and model factory at Uluberia (West Bengal) have been set up.

In 1962, production of all types of *silk* in India amounted to 17.8 lakh kg. Main production comes from Mysore, followed in order of importance by West Bengal, Assam, Jammu & Kashmir, M.P. and

Bihar. *Central Silk Board* was constituted in 1949 to look after the promotion and development of sericulture and the silk industry and to co-ordinate research.

Formalities for setting up a *Central Tasar Research Station* at Ranchi and a *Central Tasar Silk-Worm Seed Station* at Lakha (M.P.), have been completed. The *Central Silk-Worm Seed Station* at Srinagar is also engaged in evolving new strains of silk-worms.

The *Central Sericultural Research Institute*, Mysore and *Hill Rearing Station* at Coonoor (Madras) continue to work.

There is also *All-India Sericultural Training Institute* at Mysore, which provide practical and theoretical training to personnel engaged in the industry. The *Central Sericultural Research Station* at Berhampore (W. Bengal), with its sub-station at Kalimpong, conducts experiments and research.

Small Industries Extension Training Institute, Hyderabad and *National Design Institute*, Ahmedabad undertake training, research and service programmes in their respective fields.

EXPORTS OF HANDICRAFTS—The handicrafts we export cover a wide range of articles, from costly jewellery and gems to inexpensive *agarbathis* and bangles. Broadly they fall into three groups—artware, textiles and other fabrics, and utility and decoration articles. Some of the more popular items are : woollen carpets, rugs, hand-printed textiles, art metalware and precious stones.

The exports were valued at Rs. 30.68 crore in 1963-64.

KHADI & VILLAGE INDUSTRIES

The responsibility for the development of Khadi and Village industries which help in relieving unemployment and underemployment in rural areas are vested in *Khadi and Village Industries Commission*. Financial assistance to Khadi industry is given by the Commission through co-operative societies, registered institutions, the State Governments and the statutory boards set up by the State Governments. The rebate system introduced to encourage the production of Khadi, has been discontinued and a new scheme has been introduced. The new scheme ensures supply of cloth to spinners in the villages, who also grow cotton practically without any charge. The non-grower spinners also would benefit inasmuch as they would get cloth at the nominal rate of 37 paise per square yard.

A four-spindle manually operated *charkha*, known as '*Ambar Charkha*' was evolved in 1956 and a programme for the manufacture and distribution of this type of *charkhas*, and for providing training to instructors, carpenters, spinners and others was introduced in 1956-57.

The disbursement of Khadi during the year 1963-64 amounted to Rs. 16 crores. 4375 *charkhas* were manufactured and distributed in the same period.

The disbursement for village industries during the year 1963-64 amounted to Rs. 6.50 crores. These consisted of particularly village oil, cottage match, hand-made paper, village pottery and fibre industry.

SPECIAL COTTAGE-INDUSTRY PRODUCTS

Bidri work—‘Bidri’ is named after Bidar, the place of its origin. The basic material in the manufacture is an alloy mostly of zinc and copper. Pure gold or silver in sheets or wires are hammered and inlaid into carves of inlaid designs. The alloy which is of leaden colour, turns into jet black and forms a contrasting background to the silver or gold design. Articles, such as cigar and cigarette boxes, ash-trays, vases, powder boxes, trinket boxes, fruit bowls, etc., are being manufactured.

Fulkari—is the general name given to the famous Punjabi shawls, known as Bagh and Fulkari. *Fulkari* means flower craft and *Bagh*, a garden. The embroidery is done with soft untwisted silk called *pat*, on plain coarse khaddar. The motifs and designs are both rich, colourful and attractive with ends or Pallas of exquisite workmanship. The whole sheet of khaddar gets covered like a garden in full bloom and presents a gay floral appearance.

Filigree—Filigree work is an indigenous art of Orissa. It is also prevalent in Hyderabad, Kashmir and West Bengal. Pure silver wire of different shapes and gauges are used for filigree work. Charcoal and silver solders are utilised for soldering the filigree work. The types of products are—ash-trays, bangles, betel boxes, buttons, caskets, cigarette boxes, flower vases, necklaces, ear-tops, powder boxes, etc.

Horn articles—The horn industry is an indigenous cottage industry of Orissa. It is now largely found in Kerala, Orissa, Maharashtra, Andhra Pradesh and West Bengal. The main raw material is buffalo horn, though horns of deer and bison are also used.

Ivory work—Ivory-carving is an outstanding handicraft in many States of India, chief of them being Kerala, Hyderabad, Mysore, Madras, West Bengal, Delhi and Rajasthan.

Nirmal work—The toy industry of Nirmal in Adilabad district is peculiar to the Andhra Pradesh. These toys are made of ‘burgu’ and ‘runki’ woods which are very light in weight and easily workable. The products consist of vegetable and fruit trays, bangles, lamps stands, cigar and cigarette boxes, ladies’ shoe-heels, etc.

Metal Art Wares—are the polished brass with engraving or enameling of Jaipur, Kashmir, Moradabad and Banaras; the brass, copper and bronze-cast images and wrought pieces of Madurai and Tanjore with edged or encrusted mythological motifs are some of the numerous instances of this distinguished art. The other articles are flower vases, candle-sticks, decanters, finger bowls, fruit dishes, etc.

Inlay work—One of the most distinctive handicrafts in India is inlay work. This art flourishes in few places, such as Agra, Delhi and Fatehpur Sikri in the north and in Mysore and Kerala. In North India, craftsmen generally use only ivory for inlaying on woods, but in Mysore they use teakwood, brass, silver, coloured stones, etc.

STATE COTTAGE INDUSTRIES

Rajasthan—The most important cottage industry of this State is handloom weaving at Ajmer. Other industries are leather goods, toys, soaps, furniture, buttons and moodhas.

Assam—Handloom weaving is the largest and the most important cottage industry in Assam. Assam is noted for her non-mulberry silk, *viz.*, *Eri* and *Muga*. Muga is a light-brown silk used in summer and winter. The bulk of the production of raw muga silk is done in a village named Sualkuchi on the northern bank of the Brahmaputra. Muga silk is produced by a kind of caterpillar which feeds on the leaves of *som* and *sualu* trees. Eri is a rough cream-coloured silk used in winter, as it is warm. The worms feed on *eri* (castor) seeds. The most famous of the Assam fabrics are those produced by the tribal people in the hill districts. Among the Assam fabrics which are popular outside the State, are bed-covers, table-cloths, saris, *mekhalas* and furnishing materials.

Bihar—The cottage industries in this State in the order of their importance are handloom weaving, steel goods and cutlery, tanning and leather manufacture, pottery, jewellery, non-ferrous metal wares. This is the only State which produces shell buttons from the mother-of-pearl.

Gujarat—is famous for tanning and leather goods industry, brass utensils, iron and steel articles. In addition to these weaving of cotton and wool is an important industry in this State.

Mysore—There is only one cottage industry in this State *viz.*, bee-keeping and is predominant in the Coorg district.

Delhi—Among the important cottage industries of Delhi are leather industries, *gari* and *zardozi*, ivory-carving, cane and bamboo basket-making, calico printing, plastics goods, paper products, brass wares, wood work, artificial limb-making, *sola* hats, imitation jewellery, gold and silver jewellery, lock-making, tin containers, button-making, soap-making, taxi dermy, thread ball, gas mantles, wooden scales, surgical goods, sport goods and metal works.

Himachal Pradesh—The only cottage industries of the State are cotton hand-spinning and handloom weaving and woollen hand-spinning and hand-weaving. Sericulture industry exists in all its districts.

Andhra Pradesh—The important cottage industries of Andhra Pradesh are as follows : (1) *Toys* are made in different places in Andhra Pradesh, such as Kondapalli, Nirmal, Nokkapalli, and Tirupati; (2) *Carpets* of Warangal and Eluru are really the pride of Andhra Pradesh. They are woven from silk, cotton or woollen yarn; (3) The art of *fabric printing* in Andhra Pradesh is unique in character; (4) The artistic *mat-weaving industry* is carried on in Mahabubnagar district, where Thunga grass is grown abundantly; (5) *Bidriware* of Hyderabad is an important cottage industry of Andhra Pradesh. The basic material is an alloy of zinc with small proportions of other non-ferrous metals; (6) *Silver filigree work* flourishes in Karimnagar district, which shows exceedingly delicate workmanship of local goldsmiths; (7) *Himroo fabrics* have a solid

coloured ground of satin or twill decorated with figurative motifs. Himroo cloth makes very attractive ladies' coats, tunics, blouses, shawls, etc.; (8) *Lace-industry* is carried on extensively in Narsapur and Palakole; (9) *Glass bangles and beads industry* is very flourishing in Andhra Pradesh. This is done in Papanaiduper in the Chittoor district; (10) *Ivory-carving* another important handicraft.

Jammu & Kashmir—The cottage textile industry covering mainly wool and silk is an important industry. In the textile industry, the products worth mentioning are: *tweeds, gabba, pattu, pile carpet, namdas and shawls (pashmina and toosh)*. The other industries in the State are furniture made of walnut, cane and willow works, wood-carving, papier-mache work, jewellery and stone-polishing.

Madhya Pradesh—Handloom is the most important industry of this State. The products well-known throughout the country are the *chanderi* and *maheswari* saris. The other industries of some importance are: tanning and leather works, confectionery, fruit canning, brass and copper utensils, oil and soap. The hand-weaving industry is the only important cottage industry of Bhopal.

Madras—This is the most important handloom-weaving State in the country. The most noted handloom cotton products are *sarees, dhoties*, towels, sheetings and coatings. The other industries in order of merit are hosiery, carpets and druggets and *cumbles*, printing, tanning and leather goods, food processing, non-ferrous metal wares, steel goods, and toys.

Maharashtra—Handloom weaving industry is the most important cottage industry of Maharashtra. The industries in the order of their importance are tanning and leather, village oil, hand-made paper, ivory, horn and wood-carving, non-ferrous metal wares. The other industries are cutlery, jewellery and match.

Manipur—Handloom weaving industry is the most important cottage industry in this State.

Mysore—is one of the leading States in the field of cottage industries. Handloom industry is the foremost industry of the State. The most famous of its textile products are *silk sarees*, blankets, carpets, druggets and silk in running length. The other industries in the order of their importance are sericulture, and products including carving and inlay on ivory, sandalwood, rosewood, metal, glass bangles, incense and perfumery, leather goods, steel goods, soap, wooden, clay and lacquered toys and food processing.

Orissa—Handloom industry is a noted industry of Orissa. The other noted industries are silver filigree, ivory, horn and soap stone, tanning and leather goods and wooden utensils. Horn-carving is a famous old craft of Orissa.

Punjab—The important industry of Punjab is handloom industry, and the most noted textile products are furnishing fabrics, blankets and hosiery. The other important industry are furniture, wood-carving, jewellery, food processing, sport goods, non-ferrous metal wares and a variety of steel and engineering goods, leather goods, bangles

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and hosiery. Carpet-making is also a flourishing industry of Punjab. Rajasthan—The handloom industry is, of course, the most important of all. Its noted textile products are printed *sarees* and scarves, tie and dye carpets and *niwar*. Rajasthan is the biggest wood-producing State in India. Jodhpur and Jaipur are famous for the manufacture of embroidered shoes. Jaipur produces the best type of brass work in India. The other industries are art products, papier-maché, marble stone, ivory work, leather goods and toys.

Kerala—Great stride has been made with regard to some cotton industries, such as handloom textile, coir and coir mattings, grass and screw pine mats, ivory, wool products, etc.

Tripura—Besides handloom textiles, the other industries are cane and bamboo work, coir matting, oil pressing, carpentry, smithy, pottery, *bidi*-making.

Uttar Pradesh—Silk industry produces gold and silver thread brocades, silk *sarees* and scarves. Mirzapur carpets are produced in wide and varied designs. Dyeing and cloth-printing is a flourishing industry in Lucknow and Furrukhabad. Moradabad is famous for ornamental brassware. The manufacture of glass bangles, which is one of the important cottage industries in this State, is made at Ferozabad. Khurja glazed pottery is now known all over India. Other important industry is fibre industry, i.e. making of baskets, chicks and cane furniture. *Gur*-making is the biggest cottage industry in U.P. Other cottage industries of U.P. are *zari* and embroidery of Agra, Pakki Kelai of Moradabad, blankets of Nazimabad and Almora, sport goods of Meerut and gold threads of Varanasi. Kanpur is the main centre for the manufacture of *chappals* in northern India.

West Bengal—The most famous textile products of West Bengal are silk and cotton *sarees* and *dhoties*. Other industries are jute and wool-weaving, sericulture, tanning and leather goods, brass and bell-metal utensils, sport goods, ceramics, cutlery, furniture, and products including horn, ivory and wood. There has been considerable development in the manufacture of hand-made paper, palm-*gur*, mat, and in bee-keeping, etc.

FINANCIAL INSTITUTIONS

Government Financial Institutions—In recent years, several financial institutions have been set up to provide development finance to industries in the private sector, such as, the Industrial Finance Corporation of India, the State Financial Corporations of India, and the Financial Credit and Investment Corporation of India, etc.

These requirements of finance can be broadly classified into three categories, i.e., long-term, medium-term and short-term according to the duration of credit required. Long-term finance is necessary for buying machinery, provision of land, factory building, etc. Medium-term credit is required for small tools, implements, execution of bulk orders, replacement and minor repairs, etc. Short-term credit is

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needed for a few months or a year for the purchase of raw materials or for financing the processing or for holding stocks of finished articles before they are sold and for making expenses like wages.

In India, both the issue as well as marketing of industrial securities are subject to Government control and regulation. All capital issues, whether initial or further, have to receive the consent of the Government of India, before being put in the market under the Capital Issues (Control) Act, 1947.

The marketing of industrial securities is regulated under the Securities (Contracts) Regulation Act, 1947. At present there are eight stock exchanges functioning under the Act in various parts of the country.

Industrial Finance Corporation of India—The Industrial Finance Corporation of India was set up in 1948 with an authorised capital of Rs. 10 crores. The main objects of the Corporation are : (1) to render financial assistance to industrial concerns for a period not exceeding 25 years ; (2) to guarantee loans raised by the industrial concerns in the open market ; and (3) to underwrite shares and debentures issued by eligible industrial companies.

Recently, the Corporation has been empowered to guarantee (a) loans raised by industrial concerns from scheduled banks and State Cooperative banks ; (b) deferred payments due from industrial concerns with regard to their purchase of capital goods both within and outside the country ; and (c) with the prior approval of the Union Government, loans raised from and credit arrangements made in foreign currencies by industrial concerns with any bank or financial institution abroad. It can lend up to ten times its paid-up share capital and reserve fund.

The Corporation has now power to subscribe directly to the stocks or shares of an industrial concern, and also to convert at its option, loans granted or debentures subscribed to by it, into stocks or shares of the concern. The Corporation is now also empowered to render financial assistance for preservation of goods.

It has become an important source of financial help for industrial units in the private sector. The net financial assistance sanctioned by this institution over 17 years amounted to as much as Rs. 226.96 crores, of which rupee loans accounted for Rs. 152.25 crores, foreign currency loans for Rs. 22.42 crores, underwritings and direct subscriptions for Rs. 18.10 crores and guarantees for Rs. 34.19 crores. New projects benefited to the extent of 68 per cent of total disbursements and an effort has been made to encourage the establishment of industries particularly in less developed areas.

State Financial Corporations—There are at present 15 State Financial Corporations set up under the State Financial Corporations Act, 1951. The State Financial Corporations are intended to render financial assistance to small industries not exceeding generally Rs. 29 lakhs to one industry at a time. It continues to extend financial assistance to medium and small-scale industrial undertakings within their respective areas of operation. A State Financial Corporation shall have an authorised capital of Rs. 2 crores, of which Rs. 1 crore

is generally issued and paid up. The total amount of loans sanctioned by the Corporations in 1963-64 was somewhat lower at Rs. 17.85 crores as compared to Rs. 19.35 crores in the preceeding year.

The aggregate borrowing limit of a Corporation has now been raised from five times to ten times its paid-up share capital and reserve fund. By an amending Act in 1962, the State Financial Corporations are now empowered to guarantee (a) loans raised by industrial concerns from scheduled banks or State Co-operative banks and (b) deferred payments due from any industrial concerns in connection with the purchase of capital goods within India.

Industrial Credit and Investment Corporation of India—The ICIC was set up in 1955 with a view to rendering financial assistance for the growth and development of industries in the private sector. It is mostly a private concern, its share capital having been subscribed by the Reserve Bank of India, Indian commercial banks and some foreign banks. The net amount of assistance approved during 1961 aggregates to Rs. 11.30 crores. It underwrites shares of industrial concerns and may also make direct subscriptions to shares and debentures of such concerns. In 1963-64, the total financial assistance sanctioned was for a record sum of Rs. 23.05 crores as compared to Rs. 17.45 crores in 1962. It has borrowed from IBRD to the extent of \$ 60 million (Rs. 28.56 crores). Its authorised capital is Rs. 15 crores. Since its inception in 1955, the Corporation has sanctioned a total assistance of Rs. 83.21 crores till December 31, 1963.

The Refinance Corporation for Industry—The Refinance Corporation was set up in June, 1958 for the purpose of undertaking refinance business. It is a State concern. Its main business is to refinance loans made by banks and other financial institutions. The scope of its operation has been enlarged. These include : (1) the Corporation is now empowered to entertain applications for refinance of loans given jointly by two or more banks or by a bank and a term leaning institutions ; (2) it can refinance the medium-term part (i.e., instalments falling due within 7 to 10 years) of longer-term loans ; and (3) the decision to refinance medium term export credits (that is, for periods ranging from over 6 months to 5 years) granted to exports of engineering and capital goods. The Corporation sanctioned 178 applications for 23.3 crores in 1963-64.

Agricultural Refinance Corporation—was set up on 1 July, 1963. The Corporation is primarily a refinancing agency providing financial accommodation of a long-term nature for those major developmental projects which cannot be financed by the existing credit agencies. The corporation has an authorised capital of Rs. 25 crores.

National Industrial Development Corporation Ltd.—was set up in October, 1964. It was conceived mainly as an instrument of the Government for promoting, establishing and executing industries and to aid, assist and finance industrial undertakings. The 1960 the Corporation set up its Technological Consultancy Bureau which renders services to the various Government and Public Sector Projects. The Corporation has an authorised capital of Rs. 1 crore.

National Small Industries Corporation—was registered in February 1955 as a private limited company. The Corporation started with an authorised capital of Rs. 10 lakhs which was later increased to 50 lakhs. It gives financial assistance for the purchase of machinery and equipment to small enterprises. It supplies machinery on hire-purchase system and also some working capital to small industries.

Deposit Insurance Corporation—The Corporation is an autonomous statutory body with the objective of giving a measure of protection to depositors from the risk of loss in the event of a bank's failure. The Corporation has fixed the rate of premium to be paid by insured banks at 5 P. per annum for every 100 rupees of their total deposits. The maximum premium under the Act is 15 P. per Rs. 100 deposits. The Corporation is required to maintain two funds, viz., the Deposit Insurance Fund and the General Fund separately and invest the moneys in both the funds, as are not required immediately, in Central Government securities. (See also *Index*).

Export Credit and Guarantee Corporation—was set up in January 15, 1964 with an authorised capital of Rs. 5 crores. The Export Risks Insurance Corporation merged with this new Institution and ceased to function. The Corporation will mainly play a co-ordinating role and will not compete but collaborate with banks in the provision of export credit facilities. (See also *Index*).

Unit Trust of India—To facilitate investment in industrial securities by small investors, the Unit Trust was established by Government of India in 1964 and began its work on July 1, 1964. The Trust have an initial fund of Rs. 5 crores. It has put on sale units of the face value of Rs. 10/- each. These can be bought in multiples of Rs. 10/-. It is authorised to device a unit scheme under which the face value of each unit to be issued is not to be less than Rs. 10/- nor more than Rs. 100/-. The Trust is exempted from payment of income-tax, super tax and other taxes on its income. Further, income by unit-holders, if they are individuals, is exempted from income-tax if such income does not exceed Rs. 1000.

Industrial Development Bank of India—began functioning on July 3, 1964. The bank co-ordinates the activities of the industrial financing agencies like the Industrial Finance Corporation and the State Finance Corporations. It is also empowered to grant direct loans to specified projects and finance the export of capital goods produced by newly set-up engineering and other industries. It is a subsidiary of the Reserve Bank. The bank has an authorised capital of Rs. 50 crores which can be increased to Rs. 100 crores. It has an issued capital of Rs. 10 crores

Film Finance Corporation—(See *Index*).

Rehabilitation Industries Corporation, Calcutta—In order to create an effective machinery for setting up industries to provide employment to displaced persons from East Pakistan, this Corporation was established in April, 1959. The Corporation was transferred to the Ministry of Commerce and Industry (now Ministry of Industry and Supply) with effect from September 1, 1960. The

administrative control of the Corporation was re-transferred to the Ministry of Rehabilitation from October 28, 1964. The Board of the Corporation consists of 13 Directors. The authorised capital of the Corporation is Rs. 5,00,00,000 and paid up capital is Rs. 1,50,00,000. The total amount of loan advanced by Government to the Corporation till 31st January, 1965, is Rs. 111 lakhs. The Corporation has sanctioned loans to industrialists to the extent of Rs. 1,06,07,000. It is also running 23 industrial units and two industrial estates—one at Behala and the other at Bon-Hooghly, while work is in progress in the estates at Durgapur, Ranaghat and Habra. Transport Co-operative Society has been set up at Dandakaranya.

INSURANCE

NATIONALIZATION OF INSURANCE—It is unique in the annals of life insurance all over the world that the Government of India took over in 1956, the life insurance business in its own hands. The Life Insurance Corporation of India is a statutory body, which came into existence on September 1, 1956.

LIFE INSURANCE CORPORATION OF INDIA—Life insurance in India entered into a new and promising era with the setting up of the Life Insurance Corporation of India when the Union Government promulgated an Ordinance on 19th January, 1956, for taking over the management of Life Insurance Companies, there were over 160 Companies, Indian and Foreign, transacting life insurance business in India. The total number of policies on the books of these companies was nearly 50 lakhs, assuring, with bonuses, more than Rs. 1,000 crores, with an annual premium income of approximately Rs. 55 crores. The Corporation took over all the assets and liabilities of 245 insurers, including three State Insurance Departments.

Constitution of the Corporation—The Corporation has been established by an Act of Parliament, which received the assent of the President on 18th June, 1956. The Act came into force on 1st July, 1956, and the Corporation began to function on 1st September, 1956.

The Corporation consists of 15 members. Its Central Office is located in Bombay. 5 Zonal Offices, one each at Bombay, Calcutta, Delhi, Kanpur and Madras, have been established. To start with, 33 Divisional Offices have been set up. The number of branches under these offices was 180. As at 31st March 1965, besides the Central Office and five Zonal Offices, the Corporation had in all 750 Offices including Sub Offices and Development Centres. With this set-up, the Corporation have either a Branch or a Sub Office in 253 out of 318 Districts of various States and in 5 out of 10 Union Territories in India. The Corporation have also Development Centres in 31 of the remaining Districts and in one of the remaining Union Territories.

Government Guarantee—The sums assured by all Policies issued by the Corporation will be guaranteed as to payment in cash by the Government of India.

Commencement of Risk—The risk under the Corporation's Policies commences on the date of receipt of the first premium in full or the date of acceptance, whichever is the later, and the second instalment of the premium falls due on a date calculated from such date of commencement of the risk.

Non-Forfeiture Regulations—applicable to the Corporation's Policies, constitute a valuable privilege which secures automatically to the policy-holders and his dependents in the event of cessation of the payment of the premiums under his Policy a reduced Paid-up Assurance, subject to the provision that premium have been paid under the policy for not less than two years and that such Paid-up Assurance, inclusive of any attached bonus, in the case of a Policy for a sum assured of Rs. 1,000 or over is not less than Rs. 100 and in the case of a Policy for a sum assured of less than Rs. 1,000 is not less than Rs. 50. In the case of Policies entitled to participation in profits, all Bonuses declared and still attaching to the Policy at the date of cessation of payment of the premiums remain attached to the reduced Paid-up Policy but the Policy is not entitled to participate in the profits declared thereafter.

Days of Grace—One month but not less than 30 days of grace is allowed for payment of yearly, half-yearly and quarterly premiums, and 15 days for monthly premiums. When the days of grace expire on a Sunday or a public holiday, the premium must be paid on the following working day to keep the policy in force.

Revival of Lapsed Policies—When the premium is not paid within the days of grace, the Policy lapses. It may, however, be revived during the life-time of the assured but before the expiry of a period of 5 years from the due date of the first unpaid premium. Revival can be effected either on payment of the premiums in arrears with interest or under Special Revival Scheme which can be availed of only on one occasion. Under this revival scheme, a new Policy will be issued.

Loans—are granted on unencumbered Policies upto 90 p.c. of the Surrender Value but in the cases of Policies which are due to mature within 3 years a larger percentage may be granted. The rate of interest now charged is 6 p.c. per annum payable half yearly.

Joint life assurances on the lives of husband and wife have been reintroduced, subject to the condition that both should be earning and the amount of insurance should be commensurate with their separate incomes.

NEW BUSINESS IN 1964-65—The Life Insurance Corporation has secured 1531546 proposals amounting Rs. 746.67 crores for new business till the end of the financial year 1964-65. 14.44.402 of the proposals resulted into policies completing new business of Rs. 701 crores. The Corporation had received during the financial year ending March 31, 1964 as many as 1751217 proposals for Rs. 757.80 crores out of which 1646291 proposals resulted into policies for the sum assured of Rs. 702.76 crores.

Rural Business—Based on the classification of urban and rural areas as adopted in the 1961 census, 5.20 lakhs policies, being

36.2% of the total number of policies issued in India, assuring over Rs. 197 crores were issued to people in rural areas in 1964-65.

Non-Medical Business—During 1964-65 5.90 lakhs policies assuring Rs. 144.59 crores, being 21% of the total new sums assured in India, were issued under the Non-Medical Schemes. Of these 1.88 lakhs policies assuring Rs. 29.04 crores were under the Non-Medical General Scheme and 4.02 lakhs policies assuring Rs. 115.55 crores were under the Non Medical Special Scheme.

Salary Saving Scheme—Under the Salary Savings Scheme, L.I.C. issued during 1964-65 2.22 lakhs policies assuring Rs. 76.86 crores.

Foreign Business—During 1964-65 the Corporation issued 8751 policies assuring Rs. 11.05 crores in the foreign countries where it has been operating as against 8532 policies assuring Rs. 10.21 crores during the previous year.

Size of Policy—The average sum assured per policy during 1964-65 was Rs. 4,854 as against Rs. 4,269 for the previous year.

Business in Force—The total business in force as at 31st March, 1965 was Rs. 3,887 crores under 108.68 lakhs policies.

Premium and other income—The premium income for the year 1964-65 amounted to Rs. 162.25 crores as against Rs. 146.73 crores in the previous year.

The total net income for the year 1964-65 was Rs. 205.09 crores as against Rs. 179.60 crores during the previous year.

Life Fund, Investments and Total Assets—The Corporation's Life Fund as at 31st March, 1965 as Rs. 901.61 crores, registering a rise of Rs. 93.25 crores over the adjusted Life Fund at the beginning of the year.

During 1964-65, the Corporation adopted a scheme for granting loans to State Electricity Boards for Development Schemes and, accordingly, advanced loans aggregating Rs. 5 crores.

The total assets of the Corporation as at 31st March, 1965 amounted to Rs. 986.64 crores as against Rs. 880.57 crores as at 31st March, 1964. The net increase in the assets of the Corporation, since its inception, has amounted to Rs. 572 crores.

Claims—During 1964-65 the claims inclusive of bonus additions, amounted to Rs. 40.46 crores under matured policies and Rs. 12.36 crores under policies becoming claims by death. The total claims for the year amounted to Rs. 52.82 crores as compared with Rs. 44.66 crores in the previous year. The outstanding claims as at 31st March, 1965 amounted to Rs. 17.04 crores as against Rs. 14.91 crores as at 31st March, 1964.

Rate of Interest—The income from interest, dividends and rents in respect of Life business before deduction of income-tax was Rs. 43.96 crores during 1964-65 as against Rs. 38.25 crores during the previous year. The gross rate of interest realised on the mean Life Fund was 5.27% per annum as against 5.11% per annum during the previous year.

General Insurance Business—The financial year 1964-65 was the first year of operation in respect of L.I.C's General Insurance business.

The results of the year's operation have shown a gross direct premium of Rs. 46.52 lakhs. The breakdown thereof shows a premium income of Rs. 15.74 lakhs under Fire Insurance, Rs. 12.47 lakhs under Marine Insurance and Rs. 18.31 lakhs under Miscellaneous Insurance class.

The net claims during the period has been Rs. 73,000/- under Fire Insurance Rs. 1.53 lakhs under Marine Insurance and Rs. 2.88 lakhs under Miscellaneous Insurance.

Mortgages—The Own Your Home Scheme continued to operate in the 77 centres since last year. It was extended to 12 more centres during 1964-65 and to 29 further centres from 1st September, 1965. The scheme is thus now operating in 118 places thereby covering all the cities and towns in India having a population of one lakh and above and some other centres having a population of less than one lakh. During 1964-65, 939 loans amounting to Rs. 246.75 lakhs were sanctioned to the policyholders under this scheme.

The Corporation continued to advance loans to State Governments for financing various housing schemes and Land Acquisition and Development Scheme. Loans were also granted to Co-operative Housing Finance Societies in various States, to Public Limited Companies for the purpose of providing houses to their employees and to Co-operative Housing Societies of employees of Public Limited Companies and those formed by the employees of the Corporation. The total assistance given by the Corporation to the Housing development in India under these various schemes upto 31st March, 1965 amounted to Rs. 76.18 crores.

COMPULSORY REINSURANCE—The Insurance Act, 1938 was amended by Insurance (Amendment) Act, 1961. Provisions have been made in it—(1) for compulsory reinsurance with approved Indian reinsurers by every insurer of such percentages, not exceeding 30 p.c. of his business as may be specified by the Central Government, (2) for constituting an Advisory Committee which has to be consulted by the Central Government before specifying the percentages of business to be reinsured and the proportions of the reinsurance business to be allocated among the approved reinsurances.

FUNCTION AND ORGANISATION—Under the Ministry of Finance, there is the Department of Economic Affairs and one of the Divisions of this Department is the *Insurance Division*. This Insurance Division deals with the administration of the Insurance Act of 1938, the Life Insurance Corporation Act of 1938 and the Life Insurance Corporation Act of 1956.

NEW PLANS OF INSURANCE—The following new schemes have already been introduced by the Corporation: (1) *Janata Policy Scheme*—is working as a pilot project in the industrial and rural areas of Greater Bombay, Ahmedabad, Sholapur, Delhi, Rohtak, Kanpur, Calcutta, Siliguri, Madras, Madurai, Coimbatore and Hyderabad; (2) *Group Insurance and Superannuation Schemes*—provide low cost life insurance to homogeneous groups of white collar workers and factory employees under one Master Policy; (3) *Salary Saving Scheme*—this is a scheme for the employees to enable them to pay premiums by automatic deduction from their salaries; (4) *Non-medi-*

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cal Insurance—Non-medical general and special schemes have been introduced.

STATE-RUN INSURANCE SCHEMES—Though the exclusive privilege of carrying life insurance business is vested in the Life Insurance Corporation but under terms of Clause (f) of Section 44, the State Governments are enabled to carry on compulsory life insurance of their employees.

The Governments of Andhra Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Mysore, Rajasthan and Uttar Pradesh are carrying on insurance business, benefit of which is restricted to their employees. The Governments of Gujarat and Maharashtra have an Insurance Fund for the insurance of all types of Government property in their commercial and industrial undertakings. The Government of Kerala is transacting fire and miscellaneous insurance business, while the Government of Mysore is transacting miscellaneous (motor) insurance business.

GENERAL INSURANCE—Though life insurance has been nationalised, the general insurance consisting of fire, accident, marine, etc. was not nationalised. But in 1964, the LIC of India extended its activity to general insurance business. The Corporation, under a statutory stipulation, is the only general insurer in the country to operate as a nontariff insurer. There are 76 Indian and 66 non-Indian insurers for transacting general insurance business. The total assets of the general insurance business of Indian insurers as on December 31, 1962 amounted to Rs. 82.03 crores.

Foreign companies are permitted to take their sterling policies out of the country. Fire, marine and miscellaneous classes of insurance business are transacted both by the Indian insurance companies and by foreign insurance companies operating in India. In addition, certain State Governments are also transacting such business.

ASSOCIATE BODIES

Insurance Association of India—All Insurance Companies of India working under the Insurance Act constituted themselves into Insurance Association of India in 1950. The Association has two councils, namely, the Life Insurance Council and the General Insurance Council with membership confined to insurers carrying on life and general insurance business respectively. With the nationalisation of life insurance business in India, the Life Insurance Council has become *functus officio*. The General Insurance Council has evolved a code of conduct for observance by general insurers with the object of eliminating various alleged malpractices relating to payment of excessive commission. With a view to tightening control over general insurance business, the executive committee has recommended certain standards of solvency and minimum departmental reserves to be maintained by insurers on voluntary basis. The committee has set up an administrative body to administer the code of conduct.

Reinsurance Corporation of India—In consultation with the Government of India, insurers carrying on general insurance busi-

ness in India have set up Reinsurance Corporation of India to check drain on account of reinsurances from India. All member insurers will compulsorily cede to the Corporation an agreed amount of their annual premium income. Capital of the Corporation has been subscribed by both the Indian and European insurers.

Deposit Insurance Corporation—See *Index*.

CLASSES OF INSURANCE—In addition to life insurance business, there are other classes of insurance. In the restricted sphere, insurance business is carried on by the Posts and Telegraphs Department. Some States, such as Andhra Pradesh, Kerala, Mysore, Rajasthan and Uttar Pradesh are transacting life insurance business for their employees only. Marine and miscellaneous classes of business are transacted by General Insurance Companies.

Provident Societies—These Societies formed under the Provident Societies Act, serve people of moderate means. The maximum amount that could be insured with a Provident Society is Rs. 1000.

Postal Insurance—was instituted in 1883 to serve the needs of postal people only. Subsequently, the facility was extended to most civilian employees. In January 1948, members of the Defence Services were also admitted to the Fund.

INSURANCE EDUCATION—An Administrative Staff College has been established at Nagpur to give proper education to administrative officers for insurance business.

EMPLOYEES' STATE INSURANCE

The Employees' State Insurance Act of 1948, as amended in 1951, applies to all perennial factories using power and employing 20 or more persons and covers labourers and electrical staff with monthly earnings upto Rs. 400.

A Central Fund has been set up under the scheme. Workers receiving less than 30 rupees a month as wages make no contribution to it but get all the benefits. Those receiving between 30 and 45 rupees a month contribute 12 P. a week and the scale rises until a rupee and 25 P. is charged a week from workers getting 240 rupees or more a month.

Workers get free medical advice and treatment at special dispensaries or, if necessary, in their homes. They are admitted to hospitals free of cost and in remote areas medical reaches them in mobile dispensaries. If they fall ill, they receive a little more than half the daily wages as sickness benefit and can go on receiving it for 8 weeks in any period of 365 days. If they are injured in the course of their duties, they get a cash benefit in instalments and if the injury disables them permanently, they get benefits for the rest of their lives. If the injury proves fatal, long term pensions are given to their dependents. Women can get 75 P. a day or the full sickness benefit for 12 weeks at a time as help during maternity.

The Government of India pay two-thirds of the administrative costs and the State Governments meet a share of the medical expenses. Employers meet part of the expenditure, whereas workers make their contribution only in areas where the scheme is already in force.

OTHER INSURANCE FUNDS—*Employees Provident Funds Act of 1952* applies to all units employing 50 or more workers and all workers with monthly earnings of Rs. 500 or less are required to make minimum contribution of 6½ p.c. of their income. *Coal Mines Provident Funds Act* requires workers to contribute 6½ per cent of their basic wages and dearness allowance.

BANKS

INDIAN BANKING SYSTEM—India's banking system is operated along both indigenous and western lines. Under western lines, there is the *Reserve Bank of India* which is the central Bank of the country, *State Bank of India*, *Indian Joint Stock Commercial Banks* (scheduled and non-scheduled), and *Exchange Banks*.

The indigenous system comprises numerous indigenous bankers, such as, *shoriffs*, *seths*, *mahajans* and the village moneylenders, such as *Baniya*, *Sahukar* and *Khatiri*. The indigenous bankers occupy a very important place in the credit system of India. It is estimated that they finance about 70 to 80 per cent of the credit requirements of the country. In addition to these two systems of Indian banking, there are also Post Office Savings Banks, Co-operative Banks and Land Mortgage Banks, etc.

The Indian Joint Stock Commercial Banks are controlled and regulated by the Reserve Bank of India under the power vested to it by the *Indian Banking Companies Act of 1949*. Exchange banks finance India's foreign trade. Co-operative Banks and Land Mortgage Banks mainly undertake rural banking function.

CLASSIFICATION OF BANKS—The Banks of India are as follows :—

- (i) Reserve Bank of India.
- (ii) Indian Commercial Banks comprising—
 - (a) The State Bank of India and other scheduled banks ;
 - (b) Non-scheduled banks. i.e. banks other than those included in the Second Schedule to the *Reserve Bank of India Act, 1934* ;
- (iii) Foreign banks whose registered offices are located outside the Indian Union and
- (iv) State and Central Co-operative Banks, banking unions and industrial co-operative banks with capital and reserves of Rs. 1 lakh and over, registered under the laws of the States where they are situated.

Scheduled Banks—(a) have paid-up capital and reserves of an aggregate, real or exchangeable value of not less than Rs. 5 lakhs, (b) are either companies as defined in Sec. 3 of the Companies Act, 1956 or corporations or companies incorporated by or under any law in force in any place outside India or institutions notified by the Central Government on this behalf and (c) satisfy the Reserve Bank of India that their affairs are not being conducted in a manner detrimental to the interests of their depositors, are eligible for inclusion

in the Second Schedule to the Reserve Bank of India Act, 1934 and when so included are known as *scheduled banks*. The scheduled banks are further classified into (a) Indian Scheduled Banks, i.e., banks having their registered offices in India and (b) foreign scheduled banks, i.e., banks having their registered offices outside India.

Meaning of Bank—Prior to March 1949, any company which used as part of its name the word 'bank', 'bankers' or 'banking' was deemed, according to the Indian Companies Act, 1913, as amended in 1942, to be a banking company, irrespective of whether or not banking was its principal business. Under the Banking Companies Act, 1949, however, a 'banking company' has been defined as a company carrying on the business of banking in India. Further, this Act lays down the types of business which a banking company may transact in addition to banking and prescribes minimum paid-up capital and reserves, varying with the geographical coverage of a banking company. A banking company is required to use as part of its name the word 'bank', 'banker' and 'banking', while a non-banking company is prohibited from using any of these words in its name. The Banking companies Act, 1949 was extended to the whole of India, except Jammu & Kashmir, in March, 1950. However, it was extended to Kashmir in November 1956.

Number of Banks—The following is the table of Banks in India :

I. Indian Commercial Banks		1960	1961	1962	1963	1964
(i) Scheduled	..	77	67	66	65	60
(ii) Non-Scheduled	..	251	210	196	173	80
Total of (i) & (ii)	..	328	277	262	238	140†
II. Foreign Scheduled Banks		16	15	14	14	15
Total of I & II	..	344	292	276	252	155
III. Co-operative Banks*		..	..	..	..	..
(a) State Co-operative Banks	..	22	21	21	21	..
(b) Central Co-operative Banks	..	368	375	357	363	..
(c) Banking Unions & Industrial Co-operative Banks**	..	32	31	30	23	..
Total of (a), (b) & (c)	..	422	427	408	407	..

(Statistical Tables Relating to Banks in India, 1964)

*The data relate to end-June.

†16 banks amalgamated with other banks, the business of 1 bank was taken over by another bank, 63 banks ceased to transact banking business due to transfer of assets and liabilities to other banking companies, 10 banks were notified as non-banking companies, the licences of 6 banks were refused, 1 bank was excluded from the Second Schedule and 1 bank did not submit the return or balance sheet in time.

**With capital and reserves of Rs. 1 lakh and over.

INTEREST ON DEPOSITS—The Executive Committee of the Indian Banks Association and the Exchange Banks Association in India, administering the All-India Inter-Bank Agreement on the maximum rates of interest on deposits, has decided that the new rates of interest on deposits, effective from Feb. 18, 1965, will be as follows : (1) For deposits payable upto 14 days and for deposits subject to withdrawal or repayment by notice—nil (for period not exceeding 14 days). (ii) For deposits for 15 days to 45 days and for deposits subject to withdrawal or repayment by notice—1.50 p.c. per annum (for period not exceeding 45 days). (iii) For deposits for 46 days to 90 days and for deposits subject to withdrawal or repayment by notice (for period not exceeding 90 days)—3 p.c. per annum. (iv) For periods over 91 days, but less than six months it will be 5 p.c.; over six months, but less than one year 5.50 p.c.; over one year, but less than two years 6 p.c.; over two years, but less than three years 6.25 p.c.; over three years, but less than five years 6.50 p.c.; over five years, but less than seven years 7 p.c.; over seven years, but less than nine years 7.25 p.c.; and nine years and over 7.50 p.c. per annum. For Savings Bank deposits it will be 4 p.c.

(1) RESERVE BANK OF INDIA

The Reserve Bank was established on April 1, 1935. The country had no Central Bank. The issue of currency was in the hands of the Government, while the control of credit was in the hands of the Imperial Bank of India. This dual control was highly defective for advancement of banking in India. Both the Royal Commission and the Indian Central Banking Enquiry Committee appointed in 1931, recommended the establishment of a Reserve Bank.

The Reserve Bank of India was originally started as a shareholders' bank. In January 1949, it was, however, nationalised. The Government of India now hold the entire capital of the Bank.

Main Functions of the Reserve Bank—(1) *Bank of issue*—It has the sole right of issuing bank notes in India except one rupee notes which are issued by the Ministry of Finance. (2) *Banker to the Government*. (3) *Banker's Bank*—All Scheduled banks have to keep 2 to 8 p.c. of their time and 8 to 20 p.c. of their demand liabilities with the Reserve Bank, as may be fixed from time to time. (4) *Exchange Bank*—The Reserve Bank maintains the external value of the rupee at 1s. 6d. (5) *Publication of Economic data*. (6) *Agricultural Credit*—Special Agricultural Credit Department has been set up by the Reserve Bank to encourage agricultural finances. The main function of this Department is to study questions of agricultural credit and to co-ordinate the operations of the Bank in connection with agricultural credit. (7) *General Functions*—(a) accepting money and deposit without interest from the Central and State Governments, banks, local bodies, etc. (b) purchase, sale and rediscount of bills of exchange and promissory notes. (c) making of loans and advances to States, local authorities, Scheduled Banks, etc. (d) making of ways

and means advances to Central or State Governments repayable within 90 days.

During the accounting year 1964-65, the Bank's income, after making statutory and other provisions, amounted to Rs. 62.27 crores as against Rs. 52.22 crores in the previous year. The expenditure amounted to Rs. 14.27 crores as against Rs. 12.22 crores last year. The net profit available for payment to the Central Government was Rs. 48 crores as against Rs. 46 crores paid in the previous year.

LIABILITIES & ASSETS OF THE RESERVE BANK OF INDIA

(1) Issue Department

(In Lakhs of Rupees)

		<i>Notes held in Banking Dept.</i>	<i>Notes in circulation</i>	<i>Total liabilities or assets</i>	<i>Gold coin & bullion</i>	<i>Foreign securities</i>
1960	..	16,21	1,868,98	1,885,19	117,76	128,01
1961	..	17,80	1,943,66	1,961,46	117,76	116,86
1962	..	27,97	2,120,28	2,148,26	117,76	88,08
1963	..	22,46	2,339,72	2,362,18	117,76	97,46
1964	..	16,21	2,505,49	2,521,70	117,76	85,46

			<i>Total gold coin, bullion & foreign securities</i>	<i>Rupee coin</i>	<i>Govt. of India Rupee securities</i>
1960	..	..	245,77	127,36	1,512,06
1961	..	..	234,62	123,02	1,603,81
1962	..	..	205,84	123,98	1,818,44
1963	..	..	215,22	117,66	2,029,31
1964	..	..	203,22	102,38	2,216,10

(Statistical Tables Relating to Banks in India, 1964)

(2) Banking Department

(In Lakhs of Rupees)

		<i>Paid-up Capital & Reserves</i>	<i>Total Deposits</i>	<i>Other liabilities</i>	<i>Total liabilities or assets</i>	<i>Cash</i>
1960	..	85,00	289,75	106,04	480,78	16,31
1961	..	85,00	334,93	126,06	545,99	17,85
1962	..	85,00	304,07	148,84	537,91	28,03
1963	..	85,00	313,64	157,55	556,18	22,52
1964	..	85,00	301,46	207,95	594,41	16,36

		<i>Bills purchased & discounted</i>	<i>Balances held abroad</i>	<i>Loans and advances to Governments</i>	<i>Loans and advances to others</i>	<i>Investment</i>	<i>Other assets</i>
1960	..	36,88	23,72	41,25	159,91	185,41	17,30
1961	..	35,20	33,46	60,49	148,21	224,54	26,24
1962	..	72,37	8,70	40,32	171,60	183,87	33,02
1963	..	72,87	8,11	67,19	152,39	205,32	27,78
1964	..	112,89	9,73	68,41	207,70	148,31	31,01

(Statistical Tables Relating to Banks in India, 1964)

(2) INDIAN BANKS

(a) State Bank of India

The Imperial Bank of India was founded in 1921 by amalgamating three Presidency Banks—Bank of Bengal, Bank of Bombay and Bank of Madras. This Bank was constituted under a Special Act, as it was originally thought that Imperial Bank would function as a Central Bank and transact all business on behalf of the Government. So under the Special Act, the Government retained considerable control over the policy and functioning.

Control of the Imperial Bank was vested in a Central Board of Governors with local boards at Calcutta, Bombay and Madras. With the passing of the Reserve Bank of India Act in 1934, the Imperial Bank ceased to function as a Bank to the Government of India, although it was appointed as Agent of the Reserve Bank of India for the transaction of Government business at centres where the latter did not maintain its banking offices.

At the time of nationalization, Imperial Bank had 477 offices. Since then the State Bank and its subsidiaries have opened 1,100 new offices. There are 64 offices in villages. The State Bank is now launching one-man branches in villages.

LIABILITIES AND ASSETS OF THE STATE BANK OF INDIA

(In Lakhs of Rupees)

		<i>Paid-up Capital</i>	<i>Reserves</i>	<i>Total Deposits</i>	<i>Total Cash</i>	<i>Total Invest- ments</i>
1960	..	5,63	7,45	577,35	67,95	306,76
1961	..	5,63	8,20	532,46	67,54	236,73
1962	..	5,63	8,75	536,60	52,21	269,28
1963	..	5,63	9,30	560,10	47,32	290,37
1964	..	5,63	9,90	623,04	74,73	269,93

		<i>Money at call & short notice</i>	<i>Loans & Advances</i>	<i>Bills dis- counted & payable</i>	<i>Profits made</i>	<i>No of Indian offices</i>	<i>Foreign offices</i>
1960	..	1,73	216,54	15,70	1,76	901	8
1961	..	1,80	239,27	16,04	2,26	946	8
1962	..	5,07	254,54	15,94	1,97	1,002	8
1963	..	6,33	271,16	18,99	1,93	1,069	7
1964	..	2,96	367,73	25,31	2,05	1,136	7

(Statistical Tables Relating to Banks in India, 1964)

(b) Indian Scheduled Banks

The Commercial Banks of India can be classified into two classes : (1) Scheduled Banks and (2) Non-Scheduled Banks. The Reserve Bank of India maintains a Schedule and any bank which is put on that Schedule is called a Scheduled Bank.

Scheduled Banks are mainly commercial banks and provide India's internal banking facilities. They receive deposits or mortgages, discount local bills, open cash credit accounts, advance loans against stock exchange securities, grain or cloth, buy and sell shares and transact other banking business. They keep the valuables of their customers in safe custody and render other services to their customers. The agricultural business of these banks is small and is generally confined to big landholders and planters.

Total number of Offices of Scheduled Banks in India in 1964 was 5,492 (Indian Scheduled Banks : 5,402 ; Foreign Banks : 90).

Total number of Offices of Indian Scheduled Banks outside the Indian Union in 1964 was 91.

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LIABILITIES AND ASSETS OF INDIAN SCHEDULED BANKS

(In Lakhs of Rupees)

		No. of Banks	Paid-up Capital	Reserves	Total Deposits	Cash in hand	Cash at Banks
1960	..	77	36,77	31,08	1,714,43	70,18	127,41
1961	..	67	36,19	34,37	1,792,41	75,71	119,92
1962	..	66	39,96	38,59	1,974,76	87,60	112,67
1963	..	65	41,07	42,18	2,194,11	70,59	142,68
1964	..	60	42,69	45,48	2,506,14	81,02	188,36

	Investments (Govt. Securities)	Other Investments	Money at call & short notice	Loans & Advances	Bills discounted and purchased	Net profits	No. of Indian Offices	No. of Foreign Offices
1960	587,75	95,90	12,56	860,35	145,93	6,50	4,081	97
1961	531,76	107,61	31,92	925,02	166,15	9,17	4,319	97
1962	599,72	128,09	41,10	1,044,44	176,66	8,01	4,526	101
1963	641,01	151,64	47,67	1,154,32	234,62	8,79	4,918	93
1964	675,55	173,55	55,48	1,389,18	276,03	9,14	5,378	90

(Statistical Tables Relating to Banks in India, 1964)

LIABILITIES & ASSETS OF OTHER INDIAN SCHEDULED BANKS

(In Lakhs of Rupees)

	No. of Banks	Paid-up Capital	Reserves	Total Deposits	Cash in hand	Cash at Banks
1960	68	26,19	21,51	1,034,45	41,46	77,54
1961	58	25,61	23,77	1,135,04	44,72	70,14
1962	57	29,38	27,28	1,298,63	46,51	89,06
1963	57	30,44	30,15	1,481,83	59,11	89,38
1964	52	32,06	32,70	1,705,87	67,09	112,80

	Invest- ments (Govt. Secu- rities)	Other Invest- ments	Money at call & short notice	Loans & Advances	Bills dis- counted & purchased	Net profits	No. of Indian Offices	No. of Foreign Offices
1960	260,01	66,07	9,29	593,80	121,36	4,39	2,799	89
1961	274,59	75,92	24,71	627,21	140,65	6,37	2,883	89
1962	309,31	87,20	27,29	727,57	152,25	5,63	3,005	93
1963	332,50	104,90	28,27	818,52	205,73	6,38	3,283	86
1964	392,01	115,22	34,59	938,56	238,15	6,62	3,634	83

(Statistical Tables Relating to Banks in India, 1964)

LIABILITIES AND ASSETS OF IMPORTANT INDIAN COMMERCIAL BANKS, 1964

(In Thousands of Rupees)

	Paid-up Capital	Reserves	Total Deposits	Profit or Loss (—) made	Total liabilities or assets	Dividends declared
Allahabad Bank, Calcutta	82,50	1,40,47	72,62,00	16,05	89,46,83	15
Bank of Baroda, Baroda	2,00,00	2,42,62	169,53,20	51,53	212,88,53	18
Bank of India, Bombay	4,05,00	4,76,50	201,08,35	98,23	253,82,17	18
Central Bank of India, Bombay	4,71,61	5,82,51	269,41,88	1,28,69	357,56,64	20
Punjab National Bank, New Delhi	2,00,00	3,37,50	210,80,21	90,68	288,23,02	20
United Bank of India, Calcutta	2,68,74	1,09,60	86,69,19	26,34	111,09,19	7.50
United Commercial Bank, Calcutta	2,79,99	3,37,00	128,56,82	59,19	193,13,80	18

	Cash in hand	Cash at Banks	Loans and Advances	Investments (Govt. Securities)	No. of Other Investments	Offices in India
Allahabad Bank, Calcutta	2,59,87	5,60,70	41,37,19	17,88,98	4,83,73	100
Bank of Baroda, Baroda	4,66,45	10,58,33	101,18,33	31,02,74	13,11,99	220
Bank of India, Bombay	4,80,16	12,95,35	128,36,81	36,02,35	9,90,59	146
Central Bank of India, Bombay	10,13,78	14,83,74	162,40,46	62,62,76	17,85,79	380
Punjab National Bank, New Delhi	8,12,18	13,77,87	122,45,74	57,98,15	4,99,05	438
United Bank of India, Calcutta	2,98,78	4,54,14	46,76,16	25,33,24	4,62,46	116
United Commercial Bank, Calcutta	4,02,17	8,68,38	60,08,86	30,997,45	7,20,87	194

(Statistical Tables Relating to Banks in India, 1964)

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(c) Foreign Scheduled Exchange Banks

The Exchange Banks are financing the foreign trade of India. The Exchange Banks are incorporated outside India. They purchase bills in foreign currency, grant loans against shipping and other documents. They also play some part in the financing of inland trade, mainly for the movement of goods for export or of goods imported. But now they are extending their operations in the interior and are receiving deposits also on savings and fixed accounts and are engaged in financing the internal trade of India.

The Exchange Banks furnish the immediate link with the outside world of trade and commerce. The beginning dates of these Exchange Banks back to the Oriental Banking Corporation in 1842.

LIABILITIES AND ASSETS OF FOREIGN SCHEDULED BANKS
(In Lakhs of Rupees)*

	No. of Banks	Total Deposits	Cash in hand	Cash at Banks	Investments (Govt. secu- rities)	Other invest- ments
1960	16	238.95	2.21	19.53	39.82	95
1961	15	256.50	2.37	20.85	42.98	81
1962	14	260.35	2.59	17.11	44.69	2.09
1963	14	283.33	2.71	17.06	53.13	2.12
1964	15	314.20	2.80	19.59	79.45	2.41

	Money at call & short notice	Loans & Advances	Bills dis- counted & purchased	Profits	No. of Offices in India
1960	15.17	176.33	34.84	1.62	69
1961	13.14	191.94	37.73	1.99	71
1962	7.66	216.62	45.67	1.61	82
1963	12.83	239.14	38.13	1.86	86
1964	8.66	230.84	41.83	2.12	90

(Statistical Tables Relating to Banks in India, 1964)

SCHEDULED BANKS' CONSOLIDATED POSITION

(In Lakhs of Rupees)

Last Friday of March :	1962	1963	1964
No. of reporting banks	80	79	76
Demand Liabilities	907.53	1,047.05	1,349.57
Time Liabilities	1,246.86	1,286.08	1,343.75
Borrowings from Reserve Bank of India ..	16.60	19.42	29.18
Cash and balances with Reserve Bank ..	132.06	135.62	153.19
Investments in Govt. securities ..	630.44	679.44	713.94
Bank Credit	1,389.77	1,516.62	1,756.70

* Figures relate to their business in Indian Union.

LIABILITIES AND ASSETS OF ALL NON-SCHEDULED BANKS

(In Lakhs of Rupees)

	No. of Banks	Paid-up Capital	Reserves	Total Deposits	Cash in hand	Cash at Banks
1960	251	4,65	2,29	48,43	4,27	3,25
1961	210	3,68	2,12	39,96	3,53	2,68
1962	196	3,49	2,10	38,46	3,17	3,26
1963	173	3,11	2,10	34,19	2,74	2,66
1964	80	2,17	1,63	28,83	2,59	2,38

	Investments (Govt. Securities)	Investments (others)	Loans & Advances	Bills dis- counted & purchased	Net profit	No. of Indian Offices	No. of Foreign Offices
1960	12,22	4,33	29,92	97	24	789	2
1961	9,95	4,24	24,31	75	23	622	2
1962	9,96	5,19	20,41	70	20	565	1
1963	8,38	4,81	16,90	84	13	487	1
1964	6,63	5,22	14,43	68	13	326	—

(Statistical Tables Relating to Banks in India, 1964)

INDIGENOUS BANKS

The indigenous banks are those that carry on banking business according to traditional Indian methods. They are known as *Shroffs*, *Sahukers*, *Nidhis*, *Chettiyars*, etc. The Indian Central Banking Enquiry Committee defines an indigenous banker or bank as an individual or private firm receiving deposits and dealing in *hundis* or lending money. Those who do not receive deposits are to be known as moneylenders. Some of them also accept deposits from the public. Their main function is to grant loans against the security of gold or ornaments, Government securities, etc. They finance movement of agricultural crops from one part of the country to another by drawing *hundis* or internal bills of exchanges. They also discount *hundies*. The indigenous banks are generally divided into three categories—(1) Those who confine their business in banking proper, (2) those who are principally traders or merchants but employ surplus funds in banking business and (3) those who are both bankers and traders and cannot be easily classified as principally, bankers or principally, traders.

LAND MORTGAGE BANKS

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The Co-operative Societies and Banks cannot grant long-term loans to their members, because the principle of co-operative lending demands that loans should be advanced on personal credit of its members. It is not possible to grant long-term advances on personal security alone. The Land Mortgage Banks therefore supply long-term credit to the cultivator who offers his land as a security. Land Mortgage Banks have been started in all the States since 1920. The Land Mortgage Banks give long-term loans to their members for the redemption of their debts, for undertaking permanent improvements on their lands and for purchasing new plots of land.

IMPORTANT BANKING DEVELOPMENTS

Banking Companies Act—The *Banking Companies Act of 1949* safeguards the interests of the depositors and ensures the efficient and honest working of the joint stock banks. The Banking Act was amended in 1950, 1953, 1956, 1959 and 1960. The important provisions are—the paid-up capital of the joint stock banks shall not be less than one-half of the subscribed capital. Every bank must credit not less than 20 p.c. of the profits each year to the Reserve Fund unless this fund is equal to the paid-up capital. Every bank must maintain in cash, gold or approved securities, an amount of not less than 20 p.c. of its time and demand liabilities. The bank must not engage directly or indirectly in trading activities. The Act also prohibits the giving of unsecured loans to those firms in which any of the directors is interested as director or managing director. The Reserve Bank can inspect the accounts of any bank and issue necessary direction for its proper functioning.

A major development was the enactment of the Banking Laws (Miscellaneous Provisions) Act in December, 1963, amending the Reserve Bank of India Act of 1934, the Banking Companies Act of 1949 and the State Bank of India (Subsidiary Bank) Act of 1959. The main objectives of the new legislations are to enhance the Reserve Bank's powers over commercial banks as well as to regulate the acceptance of deposits by non-banking companies, or financial institutions from the public and the conduct of business of financial institutions.

Consequent upon the establishment of the Industrial Development Bank of India on July 1, 1964, the Reserve Bank of India Act, 1934 was amended to empower the Reserve Bank to make loans and advances to the IDB and purchase its bonds and debentures, and also to provide for the establishment of the National Industrial Credit Fund and to lay down the objects for which the Fund would be utilised.

NATIONAL AGRICULTURAL CREDIT FUNDS—One of the important recommendations of the Rural Credit Committee relates to the creation of two National Funds under the Reserve Bank of India. The Reserve Bank of India (Amendment) Act of 1955 autho-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh
 rised the Reserve Bank to set up these two funds, viz. *National Agricultural Credit (Long-term Operations) Fund* with an initial sum of Rs. 10 crores and *National Agricultural Credit (Stabilisation) Fund*. The Reserve Bank constituted the National Agricultural Credit (Long-term Operations) Fund on Feb. 8, 1956. The Fund has been established for making (i) *long-term* loans and advances to State Governments for a maximum period of 20 years to enable them to subscribe directly or indirectly to the share capital of co-operative credit institutions, (ii) *medium-term* loans (between 15 months and 5 years) to State Co-operative Banks for agricultural purpose, (iii) *long-term* loans and advances to Central Land Mortgage Banks upto a maximum period of 20 years, (iv) purchases of debentures of Central Land Mortgage Banks by the Reserve Bank of India. The *Stabilisation Fund* is to be applied exclusively for making *medium-term* loans and advances to State Co-operative Banks to enable them to convert their short-term credit into medium-term credit.

TRAINING IN BANKING—(1) Banks' Training College was opened at Bombay on September 14, 1954 by the Reserve Bank of India for imparting training in practical banking to supervisory staff of commercial banks. Students are trained in all aspects of banking and a dummy bank operates in the institution to give more practical work to them.

(2) A Co-operative Training Centre has been opened in Poona for training workers of the Co-operative Banks in India.

(3) Baroda University has opened training course in banking at Baroda. The course is meant for graduates in banking, who wish to take banking as a profession.

DEPOSIT INSURANCE CORPORATION—was established on January 1, 1962 with the object of giving a measure of protection to depositors, in particular small depositors, from the risk of loss of their deposits or in the event of a bank's inability to meet liabilities. Under this scheme, each depositor other than the Central and State Governments, or a foreign government or a banking company is ensured a payment of Rs. 1,500 or the amount deposited by it in the same right and capacity whichever is lower. Every insured bank is required to pay periodically to the Corporation a premium at the rate of 5 P. per annum for every Rs. 100 of its total deposits in India.

The number of insured banks declined to 146 at the end of March 1965 from 242 at the end of March 1964.

EXPORT CREDIT AND GUARANTEE CORPORATION LTD.—replaced the Export Risks Insurance Corporation on January 15, 1964. It has an authorised capital of Rs. 5 crores and a paid-up capital of Rs. one crore. It was incorporated with the principal object of insuring risks involved in the export of goods from India on credit basis. The functions of the Corporation are : (1) to administer the schemes of export risks insurance handled by Export Risks Insurance Corporation Ltd. ; (2) to administer the schemes of guarantees to remedy the various gaps in the system of export credit in the country ; and (3) to provide such supplementary credit facilities as are essential

for the promotion and development of exports. During the year 1964-65, the Corporation issued 988 policies.

INDUSTRIAL DEVELOPMENT BANK—See *Index*.

CHEQUE CLEARANCES, 1961-64

	No. of cheques (0000)	Amount (in lakhs of Rs.)		No. of cheques (0000)	Amount (in lakhs of Rs.)
<i>Calcutta</i>					
1961	.. 1,04,61	4,219,84	1963	.. 32,41	829,32
1962	.. 1,07,80	4,546,14	1964	.. 36,06	1,003,56
1963	.. 1,09,87	4,966,31	<i>Bangalore</i>		
1964	.. 1,11,45	5,218,46	1961	.. 16,14	254,65
<i>Bombay</i>			1962	.. 17,91	294,22
1961	.. 1,99,39	4,812,48	1963	.. 19,82	335,89
1962	.. 2,15,30	5,145,63	1964	.. 21,25	391,98
1963	.. 2,11,68	5,761,12	<i>Nagpur</i>		
1964	.. 2,29,39	6,325,03	1961	.. 4,71	72,30
<i>Madras</i>			1962	.. 5,16	80,34
1961	.. 51,81	690,13	1963	.. 5,70	99,07
1962	.. 53,07	758,48	1964	.. 6,24	114,77
1963	.. 57,01	850,90	<i>Others</i>		
1964	.. 59,00	967,05	1961	.. 1,64,96	2,384,28
<i>Kanpur</i>			1962	.. 1,88,31	2,776,68
1961	.. 11,90	230,71	1963	.. 2,01,89	3,121,15
1962	.. 12,56	240,86	1964	.. 2,21,15	3,583,17
1963	.. 12,86	274,19	<i>Total</i>		
1964	.. 13,25	279,04	1961	.. 5,80,91	13,272,63
<i>New Delhi</i>			1962	.. 6,29,97	14,563,90
1961	.. 27,38	608,24	1963	.. 6,51,24	16,237,95
1962	.. 29,86	721,55	1964	.. 6,97,79	17,883,06

(Statistical Tables Relating to Banks in India, 1964)

POST OFFICE SAVINGS BANKS, 1960-1964

	No. of Head Banks	No. of Sub-Banks	No. of accounts at the end of the year	Balances outstanding (in lakhs of Rupees)	No. of Depositors (in thousands)
1960	284	15,101	84,46,149	386,74.8	84,46
1961	289	16,807	92,13,348	431,42.4	92,13
1962	294	16,911	94,79,203	466,54.0	94,79
1963	313	17,166	1,00,31,574	473,27.8	1,00,32
1964	337	12,741	1,09,86,486	512,40.4	1,09,86

(Statistical Tables Relating to Banks in India, 1964)

COMMERCE

TRENDS OF INDIA'S TRADE—In recent years trends in India's foreign trade have been substantially affected by her development programmes. This accompanied by the growing requirements of raw materials and intermediate products for the existing industries, has meant a significant increase in India's imports. In the absence of a corresponding increase in exports we continue to have an adverse balance of trade.

Imports : The annual average of imports in the Second Plan period amounted to Rs. 1,072 crores as against an annual average of Rs. 724 crore in the First Plan period. India imported goods worth Rs. 1,090 crores in 1961-62, Rs. 1,081 crores in 1962-63 and Rs. 807 crores in the first nine months of 1963-64 (April-December). In regard to the composition, imports of raw materials, machinery and transport equipment, manufactured fertilisers, petroleum, oil and lubricants and other products, domestic production of which has not been adequate, have increased substantially. On the other hand, chiefly because of restrictive import policy consequential of the foreign exchange shortage, the imports of consumer goods have been held in check inspite of substantial increases in the imports of foodgrains.

With a view to keeping the imports to the minimum, foreign exchange budgeting has been introduced and licences have to be obtained from the Government for importing most of the commodities. As regards the direction of imports there has been a considerable increase in our imports from the Americas, East European countries, West Germany and Japan.

Exports : There has recently been a marked upward trend in exports. In the first nine months of 1963-64 (April-December), India's exports amounted to Rs. 581 crores. India's exports reached a record figure of Rs. 835 crores in 1964, showing an increase of Rs. 52 crores over the previous year. The respective figures for 1962-63 and 1961-62 were Rs. 694 crores and Rs. 661 crores.

What helped in maintaining the upward trend were several measures recently adopted to boost up our exports. In the first place, about 17 Export Promotion Councils have been set up for promoting exports of various commodities. Secondly, the Government of India have also granted several concessions, such as refund of excise duties concession in railway freight, grant of import licences etc. for export commodities. Thus though India's exports remained rather stagnant in the decade 1951-52 to 1960-61—the annual average was Rs. 611 crore for the First Plan and Rs. 607 crore for the Second Plan period—the position has improved considerably now.

In regard to the composition, even though the traditional items such as tea, cotton textiles, spices, fruits and vegetables etc. still form bulk of the exports, there has been a significant increase in the exports of new items, such as iron ore, manganese ore, coir manufactures, footwear, etc. Even though U. K. continues to be the largest

single purchaser of India's commodities, there has been a considerable increase in our exports to East European countries, the Americas and the ECAFE countries.

FUNCTIONS AND ORGANISATIONAL SET-UP—Pursuant to the Presidential Order of June 14, 1964, the Ministry of International Trade was renamed Ministry of Commerce. The subjects of Textiles and Jute, which had earlier been transferred to the erstwhile Ministry of Industry, were reallocated along with Sericulture to the Ministry of Commerce from the same date.

The Ministry of Commerce is the primary Government agency responsible for the country's trade, State trading, import and export trade control, tariff policies, various trade promotional measures and development and regulation of certain industries like plantation crops of tea, coffee, and rubber, all textiles including viscose and all man-made fibres and filaments, jute, coir, etc., protection of interests of Indian traders abroad, International trade agreements, etc. etc.

A brief description of the organisations functioning under the Ministry is given below :

Chief Controller of Imports and Exports, New Delhi—It is responsible for the execution of the Government's policies relating to import and export control. Branch offices of this organisation are functioning in Amritsar, Bombay, Calcutta, Madras, New Delhi, Pondicherry, Bangalore, Ernakulam, Panjim, Rajkot, Shillong, Visakhapatnam, New Kandla, Srinagar and Kanpur.

Department of Commercial Intelligence and Statistics, Calcutta—is the primary Agency for compilation and dissemination of statistical information and commercial intelligence. The Department helps in the settlement of commercial disputes.

Tariff Commission, Bombay—is a statutory body charged with the responsibility of making detailed study of the working of tariff policies and the requirements of various industries for protection. The review of its functioning is placed before Parliament annually.

Forward Markets Commission, Bombay—is a statutory body entrusted with the regulation of forward markets in pursuance of the Forward Contracts (Regulation) Act, 1952.

Directorate of Cardamom Development and Marketing, Bangalore—is responsible for implementing the recommendations of the Cardamom Development and Marketing Advisory Committee and has two regional offices at Bodinayakanur (Madras) and Saklasapur (Mysore).

Textile Commissioner, Bombay—with its headquarters in Bombay, is in charge of the development and regulation of all textile industries other than jute and coir.

Jute Commissioner, Calcutta—looks after the development of the jute industry in India. The development of the jute mill machinery industry and the sponsoring of import licence applications for machinery are under its charge.

Central Sericultural Research Station, Berhampore—undertakes research for the improvement and development of the sericulture industry and cocoon production.

Administrator, Kandla Free Trade Zone—is responsible for the implementation and supervision of the Government's scheme for the establishment of a Free Trade Zone.

All India Handloom Board, Bombay—advises Government generally on problems of the handloom industry, examines development schemes and makes recommendations for financial assistance.

ADVISORY BODIES AND TRADE PROMOTION INSTITUTIONS

Board of Trade—is an advisory body of the Ministry, consisting of 22 members from top ranks of trade and industry, economists, and Government representatives with the Minister of Commerce as its Chairman. The Board was constituted on May 11, 1962. The Board meets to review important developments in the country's trade and to go into specific problems relating to the export promotion. It also undertakes intensive studies by experts on specific problems.

Export-Import Advisory Council—In order to forge closer relationship between imports and exports, the Ministry's two advisory councils, i.e., Import Advisory Council and Export Promotion Advisory Council were combined into one single body—Export-Import Advisory Council on February 3, 1964. Its functions include, *inter alia*, (1) advising Government on policies and programmes of foreign trade, (2) making suggestions on import-export policies, and (3) study of the problem of traders, manufacturers and consumers. Port Advisory Committees also function at Bombay, Madras and Calcutta and a similar Committee for the Northern Region functions at Delhi.

Export Advisory Committees—An Export Promotion Advisory Committee was constituted during 1964-65 for the Northern Region. Regional Port Export Advisory Committees already function at Bombay, Calcutta, Madras and Ernakulam. These Committees make detailed studies of the export possibilities in respect of specific groups of commodities in their respective regions.

Export Inspection Council—is a statutory body set up to advise on the introduction and enforcement of quality control, compulsory pre-shipment inspection.

Indian Institute of Foreign Trade—is an autonomous organisation set up in April, 1963. Its principal activities fall under the following heads : (i) Training of personnel in modern techniques of international trade, (ii) Organising research in problems of foreign trade, (iii) Organisation of marketing research, area surveys, commodity surveys and market surveys, (iv) Dissemination of information arising from its activities relating to research etc.

Export Promotion Council—With a view to securing active association of growers, producers and exporters in the drive for export promotion, the Ministry has set up 17 Export Promotion Councils for important groups of commodities, namely. Cotton Textiles, Silk and Rayon, Plastics and Linoleum, Cashew, Tobacco, Sports Goods, Chemicals and Allied products, Basic Chemicals, Pharmaceuticals, and Soaps, Shellac, Leather, Finished Leather and Leather manufactures, Mica, Spices, Marine Products, Processed Foods, Engineering Goods and

Wool and Woollen Goods. The Councils perform both advisory and executive functions.*

Commodity Boards—There are five Commodity Boards attached to the Ministry for promoting tea, coffee, coir, rubber and silk. These Boards are statutory bodies and are responsible for the production and export of the respective commodities.*

Indian Council for Trade Fairs and Exhibitions—A new autonomous organisation has been set up recently with the main object to promote and organise participation in industrial and trade fairs in India and abroad and also to intensify visual commercial publicity.

CORPORATIONS—The Ministry has set up six Corporations for trade promotion: (1) The State Trading Corporation of India Ltd.; (2) The Minerals and Metals Trading Corporation of India Ltd.; (3) The Export Credit and Guarantee Corporation Ltd.; (4) The Handicrafts and Handlooms Export Corporation of India Ltd.; (5) The Indian Motion Pictures Export Corporation Ltd.; and (6) The Metal Scrap Trade Corporation (*For details of these Corporations, see Index*).

A three-man committee consisting of the Commerce Secretary (Chairman) and representatives of the Finance Ministry and the Ministry dealing with the commodity had been appointed in April, 1965, which would decide the quantum of tax credit certificates for exports. The Committee will be a standing committee and will make its recommendations from time to time for consideration of Government. It will also recommend the commodities for whose exports the certificates should be issued.

EXPORTS

India's foreign trade during the calendar year 1964 reached an all-time high peak. Total exports stood at Rs. 835 crores—the highest so far—showing an increase of Rs. 52 crores over exports in 1963. Imports during the same period touched the highest level of Rs. 1,250 crores as compared to Rs. 1,178 crores in 1963. India's trade deficit somewhat widened during 1964 as a result of a larger rise in imports. The relevant statistics are given below:

		Value		Net
		Rs. Crores		increase (—)
		1964	1963	decrease (+)
Imports	.. ..	1250	1178	+72
Total exports	.. ..	835	783	+52
Deficit trade balance	.. ..	415	395	—20

The increase of Rs. 52 crores in exports during 1964 over 1963 is somewhat lower as compared to the increase of Rs. 98 crores recorded in 1963 over 1962.

Over the period of two years the rise in our exports amounting to Rs. 150 crores in 1964 over 1962 was the result of larger exports to all the regions of the world excepting exports to Africa where they showed a nominal decline. The increase in exports in the last two

* The names and addresses of the Export Promotion Councils and Commodity Boards are given at the end of this section.

years amounting to Rs. 102 crores was with the free foreign exchange countries and increase of Rs. 48 crores of exports was with respect to East European (rupee payment) countries.

In 1964, the largest increase of Rs. 55 crores over the exports in 1962 was achieved in respect of Asia, of which the ECAFE countries accounted for an increase of Rs. 50 crores. In Asia, Japan alone accounted for an increase of Rs. 23 crores over the previous year.

Exports to West Europe were higher in 1964 over 1962 by Rs. 28 crores mainly because of an increase of Rs. 18 crores in respect of the U. K. and Rs. 12 crores in respect of E. E. C. countries. Exports to other West European countries showed a nominal decline.

Exports to the U.S.A. rose in 1964 by Rs. 29 crores over the exports of 1962. There was, however, a slight setback in our exports to Canada amounting to a decline of Rs. 6 crores.

Exports to the East European countries showed an increase of Rs. 48 crores in 1964 over 1962, of which U. S. S. R. alone accounted for an increase of Rs. 39 crores.

Exports at Rs. 48 crores to Africa in 1964 were lower by Rs. 2 crores as compared to exports in 1962 mainly due to the fall in exports to Sudan by Rs. 4 crores.

The relevant statistics are given below :

					Value Rs. crores			
					1962	1963	1964	Net increase (+) decrease (-) in 1964 over 1962
I. Asia	..	..	..	..	157	206	212	+55
(a) ECAFE Countries	..	..	..	..	134	178	184	+50
(b) Japan	..	..	..	..	39	57	62	+23
II. East Europe	..	..	..	..	89	102	137	+48
(a) U.S.S.R.	..	..	..	..	36	48	75	+39
III. North and South America								
(a) U.S.A.	..	..	..	..	113	125	142	+29
(b) Canada	..	..	..	..	23	21	17	-6
(c) Latin America	..	..	..	..	21	19	19	-2
IV. West Europe	..	..	..	..	232	263	260	+38
(a) U.K.	..	..	..	..	161	174	179	+18
(b) E.E.C.	..	..	..	..	51	63	63	+12
(c) The rest of West Europe	..	..	..	..	20	26	18	-2
V. Africa	..	..	..	..	50	46	48	-2
(a) Egypt	..	..	..	..	13	12	16	+3
(b) Sudan	..	..	..	..	10	8	7	-3
(c) Nigeria	..	..	..	..	6	4	5	-1
Grand total of exports	..	..	..	..	685	783	835	150

Certain new developments in India's export trade in 1964-65 have been highlighted in a survey published by the would trade department of the Indian Chamber of Commerce, Calcutta.

The survey points out that in jute goods the increase in the export of carpet backing cloth has been significant.

India started the manufacture of this item only a few years ago and the Third Five-Year Plan document made no reference at all to this. The quantity of carpet backing cloth exported in 1964-65 was 107,000 tons, compared to only 44,000 tons in 1961-62, an increase of 143% ; most of it was exported to the U.S.A. valued at about Rs. 30 crores.

The emergence of the U.S.S.R. as a major buyer of Indian jute goods is another significant development. Exports to Soviet Russia in 1964-65 was about 132,000 metric tons against 71,000 metric tons in 1961-62.

The U.S.S.R. has also become India's largest customer for tea, next only to the U.K. The export of tea to the U.S.S.R. was valued at Rs. 15 crores in 1964-65, compared to Rs. 11 crores in 1963-64. Tea export to Australia rose from Rs. 1.92 crores in 1963-64 to Rs. 2.77 crores in 1964-65.

There was also an increase in the export of ready-made garments (clothing except fur clothing) from Rs. 4.17 crores in 1963-64 to Rs. 4.56 crores in 1964-65.

In engineering goods, further progress was made in the diversification of exports. Among the new items now being exported, the more important are high-speed production lathes, milling machines, high-speed cutting tools, passenger and bus chassis, batteries for motor vehicles, box cameras, transistor radios, signalling equipment and ring frames. Big increases in exports were recorded in diesel engines from Rs. 58 lakhs in 1963-64 to Rs. 116 lakhs in 1964-65, motor vehicles and components from Rs. 73 lakhs to Rs. 116 lakhs, electric wires and cables from Rs. 12 lakhs to Rs. 33 lakhs and wood screws from Rs. 8 lakhs to Rs. 21 lakhs.

Among chemicals and allied products, a remarkable increase in exports took place in rubber manufactures from Rs. 136.7 lakhs in 1963-64 to Rs. 248.4 lakhs in 1964-65, glass and glassware from Rs. 33.2 lakhs to Rs. 63.7 lakhs, paints and related items from Rs. 37.5 lakhs to Rs. 50.8 lakhs and paper and paper products from Rs. 183 lakhs to Rs. 214 lakhs.

For the first time, India was able to export sheet glass worth Rs. 20 lakhs, mostly to South Vietnam. Yugoslavia emerged as the largest importer of Indian rubber tyres. These were also exported to highly advanced countries like the U.K., West Germany, Canada and the Netherlands. To Czechoslovakia India exported rubber manufactures worth Rs. 11 lakhs. The export of paper and paper products like exercise books, diaries, periodicals, carbon papers and stencils also showed a fairly large increase. The export of 3,000 cycle tyres to Nigeria was another new development in the last year.

Another important event was the successful attempt made by the State Trading Corporation to introduce fruit juices into the

European countries. Last year, contracts for the export of 860 million tonnes of mango nectar for Rs. 12 lakhs and 150 million tonnes of pineapple juice worth about Rs. 2 lakhs were concluded with Russia.

Among other notable achievements, mention is made of the export of 116 million litres of motor spirit valued at Rs. 91 lakhs to the U.K. and of 31 million litres worth Rs. 27 lakhs to Sudan; 1.2 lakhs metric tons of iron ore valued at Rs. 29 lakhs to Switzerland; insecticides and fungicides valued at Rs. 50 lakhs to Russia; 11,000 metric tons of iron ore and Rs. 5 lakhs worth of house-hold sewing machines to Bulgaria and 350 metric tons of coffee valued at Rs. 18 lakhs to Rumania. The export of these items to the countries concerned in the previous year was either absent or negligible.

- **Mudaliar Body Report Accepted**—The conclusions and recommendations of the A. R. Mudaliar Committee on export promotion was accepted by the Commerce Ministry.

The group was headed by Dr. A. Ramaswami Mudaliar. Other members of the Committee were : Dr. P. S. Lokanathan, Director-General, National Council of Applied Economic Research, Mr. B. N. Adarkar, Additional Secretary, Finance Ministry, Mr. Govind Narain, Chairman, Minerals and Metals Trading Corporation, Mr. H. D. Shourie, Joint Secretary, Commerce Ministry, and Mr. C. R. Krishnaswami, Joint Director, Commerce Ministry.

The Committee had called for building up a cadre of efficient business houses to undertake export trade on a scientific and sustained basis as part of the Government's all-out effort to increase substantially exports in the coming years.

The Government was in full agreement with the Committee's approach and considered it was of the greatest importance that proper stress be laid on the question of the competence of exporting units.

While giving necessary encouragement and removing any obstacles in the way of export units which had shown the capacity and willingness to export in a purposeful and responsible manner, the Government had no intention to keep out small-scale manufacturers or new exporters from the field of export. However, it was necessary that they should be sufficiently competent to undertake exports on an appreciable scale and in a sustained manner.

IMPORTS

IMPORT CONTROL POLICY—The basic objective of Indian import controls is to allocate India's limited supply of foreign exchange among its most essential import needs. Import policy is guided by the position of the country's sterling balance. On the basis of this position, import quotas are liberalised or restricted. At present 170 goods have been licensed for established importers. The licences are given for goods specially important. To promote the family planning programme, the quota for rubber contraceptives was liberalised. Increased allocation of foreign exchange has been given to small industries. The changes are, however, made, wherever practicable.

in the light of suggestions made by the Export and Import Advisory Council. In general, capital goods, capital repairs, and raw materials required by industry are given the highest priority in the granting of import licences. Licences are granted for only a few types of consumer goods and that only for limited quantities. Import licences are issued less freely for goods which compete with products of an Indian industry. Import control also involves directional controls, in that imports from soft currency areas are more freely licenced than those from dollar and other hard currency areas.

Due to the rapid depletion of foreign exchange reserves, the Government of India have adopted a more restrictive import policy. This restrictive policy of import is being gradually intensified with the result that the drastic cuts in imports of non-essential consumer goods are being made every year.

On the recommendation of the *Mudaliar Committee*, i.e. Import and Export Policy Committee, licences are issued on an annual basis, only one-half of the value of the annual licence can be utilised within the first six months.

Licences are of two types : (1) *Open General Licences* and (2) *Individual Licences*. The O. G. L. takes the form of an announcement granting general permission to import particular commodities into India from specified countries. Individual licences specify the importer, the value and/or quantity of the designated commodity and the country or currency area of source.

IMPORTS—during 1964 at Rs. 1,250 crores were higher by Rs. 72 crores as compared to 1963. Imports of raw cotton and iron and steel were higher by Rs. 15 crores each. Imports of machinery and components and spare parts for manufacture of indigenous capital goods and machinery were valued at Rs. 387 crores in 1964 and were higher by Rs. 41 crores as compared to such imports in 1963. Moderate increases in imports were also recorded in respect of jute raw, chemical elements and compounds, textiles yarn and thread, and non-ferrous metals, fruits, vegetables, instruments and appliances etc. In spite of the heavy increase of about Rs. 170 crores on account of higher imports of the above-mentioned items, the overall increase in the import bill is estimated at about Rs. 72 crores only on account of reductions in imports of several items like petroleum products, fuels, lubricants etc. The significant features of directions of India's imports during 1964 were the rise in imports from the U.S.A. because of the larger imports of cereals. Imports from U.S.S.R. Poland, Czechoslovakia and Yugoslavia increased by Rs. 10 crores, Rs. 7 crores, Rs. 4 crores and Rs. 3 crores respectively.

INDIAN EXCHANGE CONTROL—Foreign exchange has been under control in India since 1939. The exchange control gives the Government wide powers to control transactions in foreign exchange and securities and in the import or export of bullion or currency. Transactions between India and all foreign countries are subject to exchange regulations, although regulations vary somewhat as applied to different countries. The object of the Indian Exchange Control is to secure a balance in international payments account.

There are restrictions on imports but remittances are freely allowed against permitted imports. In fact, a specific or a general licence to import any goods carries with it the right to remit funds. The regulations also allow remittance of profits, interest, dividends, savings of foreign companies and foreign nationals carrying on business in the country. There is a quota of exchange for travel within the soft currency areas, though travel to dollar areas has to be specially authorised. Investment of Indian capital in foreign countries is not permitted except in the case of opening of branches of trading, banking and insurance companies.

The Reserve Bank of India is in charge of the overall administration of exchange control. However, it has delegated considerable authority over day-to-day operations to those banks and their branches that have been authorised to deal in foreign exchange. All exchanges must be bought and sold at prices prescribed by the Reserve Bank of India.

Handicrafts and Handlooms Exports Corporation of India Ltd.—is a subsidiary of the State Trading Corporation and has been entrusted with the task of export promotion of handicrafts and handloom products (See also *Index*).

Metal Scrap Trade Corporation Ltd.—was registered on September 9, 1964 at Calcutta and had started functioning. The authorised capital of the Corporation is Rs. 2 crores. The objects for which the Corporation has been set up are to procure, purchase, process, convert, market, import and export ferrous and non-ferrous scrap.

MINERALS AND METALS TRADING CORPORATION—was incorporated on September 26, 1963 and started functioning in October, 1963 to devote concentrated attention to exports, planning and development of mineral ores and import of metals.

INDIAN MOTION PICTURES EXPORT CORPORATION LTD.—was registered in Bombay on September 19, 1963. Its main objective is to purchase, market, export and exhibit films and also to develop and maintain marketing and distributing abroad Indian films (See also *Index*).

DIRECTION OF INDIA'S FOREIGN TRADE

(In Lakhs of Rupees)

	<i>Imports</i> (—)	<i>Exports</i> (+)	<i>Balance</i>
1960-61	1,121,62	642,32	—479,30
1961-62	1,090,06	660,34	—429,72
1962-63	1,131,47	685,48	—445,99
	(1,135,56)	(701,78)	(—433,78)
1963-64	1,222,85	793,24	—429,61
1964-65	1,262,12	838,70	—423,42

(Report on Currency and Finance, 1964-65).

INDIA'S FOREIGN EXCHANGE RESERVES

(In Lakhs of Rupees)

	<i>Assets</i>	<i>Movements</i> (increase + decrease -)		<i>Assets</i>	<i>Movements</i> (increase + decrease -)
1950-51	.. 951,41	+ 28,55	1959-60	.. 362,87	-16,05
1955-56	.. 824,61	+ 10,47	1960-61	.. 303,61	-59,25
1956-57	.. 681,10	-143,51	1961-62	.. 297,31	- 6,30
1957-58	.. 421,22	-259,88	1962-63	.. 295,10	- 2,21
1958-59	.. 378,92	- 42,30	1963-64	.. 305,81	+10,71
			1964-65	.. 249,68	-56,13

(Report on Currency and Finance, 1964-65).

INDIA'S BALANCE OF PAYMENTS

(In Lakhs of Rupees)

	1951-52	1955-56	1956-57	1960-61	1961-62	1962-63	1963-64	1964-65
							(Apr.-Dec.)	
Imports c.i.f.	9,629	7,731	11,021	11,057	10,060	10,913	12,307	10,515
Exports f.o.b.	7,301	6,403	6,352	6,305	6,683	6,822	8,017	6,118
Trade Balance	-2,328	-1,328	-3,131	-3,987	-2,986	-3,498	-3,819	-4,508
Current Account (Net)	-1,626	67	-3,128	-3,924	-3,064	-3,455	-3,353	-3,263

INDIA'S FOREIGN TRADE

(Merchandise)

(In Lakhs of Rupees)

	<i>Imports</i> (-)	<i>Exports</i> (+)	<i>Balance of Trade</i>
1950-51	.. 650,22	600,64	- 49,58
1955-56	.. 774,25	608,90	- 165,35
1956-57	.. 902,91	619,62	- 283,29
1957-58	.. 1,036,40	935,14	- 101,21
1958-59	.. 903,64	572,64	- 331,00
1959-60	.. 961,45	639,65	- 321,80
1960-61	.. 1,121,62	642,07	- 479,55
1961-62	.. 1,091,63	660,58	- 431,05
1962-63	.. 1,131,48	685,32	- 446,16
1963-64	.. 1,221,19	793,24	- 427,95
1964-65	.. 1,210,27	838,43	- 371,84

ADDRESS OF EXPORT PROMOTION COUNCILS
AND COMMODITY BOARDS

A. Export Promotion Councils

1. Cashew Export Promotion Council, World Trade Centre, Mahatma Gandhi Road, Ernakulam-6.
2. Chemicals and Allied Products Export Promotion Council, 14/1-B Ezra Street, Calcutta-1.
3. Cotton Textiles Export Promotion Council, Cecil Court, 4th Floor, 26, Landsdowne Road, Apollo Bunder, Bombay-1.
4. Engineering Export Promotion Council, 14/1-B, Ezra Street, 3rd Floor, Calcutta-1.
5. Leather Export Promotion Council, Marble Hall, 3/38, Vepery High Road, Madras-3.
6. Marine Products Export Promotion Council, World Trade Centre, Mahatma Gandhi Road, Ernakulam-6.
7. Mica Export Promotion Council, 6, Dacres' Lane, Calcutta-1.
8. Plastics and Linoleum Export Promotion Council, Patel Industrial Centre, 2nd Floor, 68, Tardeo Road, Bombay-34.
9. Shellac Export Promotion Council, 14/1-B, Ezra Street, Calcutta-1.
10. Silk and Rayon Textiles Export Promotion Council, Resham Bhavan, 78, Veer Nariman Road, Bombay-1.
11. Spices Export Promotion Council, World Trade Centre, Mahatma Gandhi Road, Ernakulam-6.
12. Sports Goods Export Promotion Council, 1E/6, Jhandewala Extn., New Delhi-5.
13. Tobacco Export Promotion Council, Sire Mansion (2nd floor), 123, Mount Road, Madras.
14. Processed Foods Export Promotion Council, 119, Jorbagh, New Delhi-3.
15. Basic Chemicals, Pharmaceuticals and Soaps Export Promotion Council, Plot No. 56, Ashok Chambers (5th floor), Broach Street, Bombay-1.
16. Export Promotion Council for Finished Leather and Leather Manufactures, Upper India Chamber of Commerce Building, 14/69, Civil Lines, Kanpur.
17. Wool and Woollen Goods Export Promotion Council, C/o Indian Woollen Mills Federation, G-4, Advent Building, Fareshore Road, Bombay-1.

B. Commodity Boards

18. Tea Board,
14, Brabourne Road,
P. B. No. 2172,
Calcutta.

19. Coir Board,
P. B. No. 80,
Ernakulam (Kerala).

20. Coffee Board,
No. 1, Vidhana Veedhi,
P. B. No. 2,
Bangalore (Mysore).
21. Rubber Board,
P. B. No. 43,
Kottayam (Kerala).
22. Central Silk Board,
'Meghdoot'
95/B, Marine Drive,
Bombay-2.

COMPANIES

DEPARTMENT OF COMPANY LAW ADMINISTRATION—

A full-fledged Department of Company Law Administration was created in August, 1955. This Department has been transferred from the Ministry of Finance to the Ministry of Law from 24 January, 1966. The responsibility of this Department includes all problems connected with the structure and internal management of joint stock companies. Other ancillary responsibilities of the Department include professions of Chartered Accountants, Cost and Works Accountants, and Company Secretaries. The profession of accountancy is governed by the *Chartered Accountants Act, 1949*, under which the Institute of Chartered Accountants has been set up in New Delhi. There are also regional bodies under the Institute functioning at important centres. With regard to the Cost and Works Accountancy, the Institute of Costs and Works Accountants in Calcutta was accorded Government recognition in 1957 and necessary Act was passed in 1959. Under this Act, statutory recognition has been given to the Institute of Cost and Works Accountants of India in Calcutta.

The administration of the Companies Act and the regulation of the ancillary professions of Chartered Accountants, Cost and Works Accountants and Company Secretaries which are related to the working of the corporate sector, continue to be the responsibilities of this Department.

The Department is organised into 16 sections. There is a Research and Statistical Branch to collect up-to-date statistical data relating to various facts of company management.

The activities of the Research and Statistics Division fall into four broad heads—(a) collection and compilation of company statistics, (b) dissemination of information on important developments in the corporate sector in India and abroad, (c) preparation of research studies on subjects relating to company management and finance, (d) preparation of statutory and other reports relating to the working of the Companies Act.

In addition to the above set-up, the Department has also established four Regional Directorates at Bombay, Calcutta, Madras and Delhi,

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consisting of a Regional Director, a Company Accountant and a Company Law Solicitor in each region. The main functions of these Directorates are—

- (1) to remain in close connection with the State Governments.
- (2) to watch the performance of the Registrars of Companies.
- (3) to watch the progress of enquiries and investigations into the affairs of the Companies by the Inspectors.
- (4) to remain in touch with the important commercial and industrial developments in the States and the trends of company managements and assist in securing the enforcement of Company Law.
- (5) to function as a liaison office between the State and the Central Governments.
- (6) to guide the public and particularly the small companies by explaining the correct implication of the Companies Act.

There is also a *Prosecution Division* to ensure effective implementation of the Act to check the instances of defaults committed.

Advisory Committee and Honorary Adviser—There are two Advisory Committees known as *Technical Advisory Committee* and *Research Advisory Committee*. An Honorary Adviser has also been appointed to advise the Government on the measures to be taken for the creation of better consciousness in the public and private sectors of the need for introducing scientific internal accounting methods and practices in joint stock companies as an aid to their efficient management.

COMPANY LAW ADVISORY COMMISSION—This was set up in accordance with S. 410 of the Companies Act, 1956. The Advisory Commission is required to enquire and advise the Government on the following—

- (1) before the issue of a notification relating to termination of managing agency in respect of any description of industry or business under Section 344 of the Act.
- (2) on applications received by the Government for the appointment of managing director/managing agents, increase in the remuneration of directors, managing directors or managing agents, change in the constitution of managing agents, variations in the terms of managing agency agreement, and
- (3) on such other matter as may be referred to it by the Government.

ADVISORY BOARD OF COMPANY SECRETARIES—An Advisory Board has been formed for assisting the Government in standardising the basic qualifications for appointments as company secretaries and holding the qualifying examinations. The Board consists of experienced representatives of the profession and nominees of several Chambers of Commerce.

FRAUD SQUAD—After the passing of the Companies Act, 1956, the need was felt for a special police organisation to deal with the more serious company offences, i.e., frauds, embezzlements of company funds, criminal breach of trust. A Fraud Squad was therefore constituted in July, 1959 with its headquarters at New Delhi. The Squad

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functions as a branch of the Special Police Establishment in the Home Affairs Ministry.

JOINT STOCK COMPANIES AT WORK—The total number of Joint Stock Companies at work in India in 1964-65 was 26,654 accounting for a total paid-up capital of Rs. 25,649 millions. Of these, the number of public and private limited companies was 5,978 and 20,676 with a paid-up capital of Rs. 11,749 and Rs. 13,900 millions respectively.

STATEWISE DISTRIBUTION OF COMPANIES

(As on March 31, 1963)

Andhra Pradesh	..	466	Rajasthan	..	434
Assam	..	372	Uttar Pradesh	..	1,068
Bihar	..	338	West Bengal	..	8,754
Gujarat	..	890	Andaman & Nicobar	..	
Kerala	..	1,046	Islands	..	1
Madhya Pradesh	..	331	Goa	..	1
Madras	..	2,933	Himachal Pradesh	..	9
Maharashtra	..	5,152	Delhi	..	2,001
Mysore	..	665	Manipur	..	5
Orissa	..	216	Tripura	..	8
Punjab	..	834			
			Total	..	25,524

GOVERNMENT & NON-GOVERNMENT COMPANIES AT WORK

Number	1960-61	1961-62	1964-65
Govt. Companies	26,108	24,757	26,654
Non-Govt. Companies	137	155	188
Paid-up Capital (Rs. million)	25,971	24,602	26,466
Govt. Companies	17,246	18,794	25,649
Non-Govt. Companies	5,244	5,955	10,315
	12,002	12,839	15,334

STOCK EXCHANGE

With firms of stock-brokers, the Stock Exchange serves some million investors who have different securities to choose from. If you consult a stock-broker, he will advise you according to your particular investment needs. There he will buy or sell for you in the market to your best advantage and handle all the formalities. For conducting transactions he receives commission on a fixed scale. His expert advice costs you nothing.

If you consider investing in stocks and shares, bear in mind that prices may go down as well as up. For the new investor, here are two commonsense rules: first, make due provision for emergencies,

such as illness and for family security. Then, get expert advice. Tips and hunches are no substitute for solid information and experience. If you wish to get in touch with a stock-broker with a view to investment, write to the Secretary of the Stock Exchange and he will send you a list of firms to choose from.

How does the Stock Exchange Serve the Non-Investor—Here are some of the principal ways in which the work of the Stock Exchange benefits the whole community.

Most of the goods we buy and use every day—from tooth-brushes to radio sets and motor-cars—are made by companies financed through public investment. Without large-scale production, such goods would have cost us far more. Directly or indirectly, these companies give employment to many million of people. And they carry on most of the export trade without which we in this country would soon find ourselves literally starving.

Finally, although you may never have bought a share in your life, it is probable that you (like two adults out of three in India) are yourself an *indirect* investor on the Stock Exchange. This happens if you have money in a bank or savings bank, or have an insurance policy of any kind, or contribute to a trade union, a Friendly Society, a pension fund or anything similar. Because all such organisations make use of the Stock Exchange to invest the money you contribute, to your eventual benefits.

The Stock Exchange is simply a market place where securities are bought and sold under safeguards for the protection of investors. The Stock Exchange does not fix the prices; they are determined solely by the laws of supply and demand in this free and active market.

The word *Securities* cover all the kinds of investment with which the Stock Exchange is concerned. The following are the main types of security:

(1) *Government or Municipal Loans or Bonds*—are the means by which Governments and public authorities borrow money to meet expenses not covered by taxation. These securities pay a fixed rate of interest.

(2) *Debenture Stocks*—issued by companies, are also fixed interest loans, secured on the assets of the companies.

(3) *Shares*—are the capital of companies. A new company which needs capital to get started (e.g. to build a factory), offers shares for sale to the public; so does an existing company which needs more capital to extend its business.

There are two main kinds of shares to meet the different needs of the investor. *Preference* shares have a prior claim on a company's profits, but pay only on a fixed rate of dividend. Thus they may suit the investor who wants a limited profit on his money.

Ordinary or Deferred shares involve more risk but may earn more profit. The ordinary shareholders are, in effect, the owner of the business. If it does badly, they may get no dividend at all; if it does well, any extra profit distributed is added to their dividends. Thus the market values of the ordinary shares are apt to fluctuate with the profits or expected profits of the company.

Cumulative Preference shares entitle the holders to arrears of interest before other shareholders receive interest for current year. Another kind of share is known as *Equity* share. When fresh shares are issued by an existing company, those shares are first offered to the existing shareholders according to the fixed quota in proportion of their original shares. If they are not taken in proportion or at all, these equity shares may be issued to general public.

Investment—Investment is vital to the country's prosperity and development, to expand our industries and to provide employment. Great capital sums are needed every year to pay for modern industrial equipment. Some of India's industry and commerce is carried on by companies for stocks and shares owned by the public. The Stock Exchange provides the necessary mechanism for raising all these capital.

Stock Exchange Serves Investors—No one would buy shares if it meant tying up money for ever; the investor must be sure of a market in which he can sell again when he chooses. The Stock Exchange provides this essential market where an investor can buy or sell at fair competitive prices.

STOCK EXCHANGES IN INDIA

Calcutta Stock Exchange, Lyons Range, Calcutta.

Bombay Stock Exchange, Dalal Street, Bombay.

Madras Stock Exchange, Madras.

Delhi Stock Exchange, Delhi.

Ahmedabad Stock Exchange, Ahmedabad.

Hyderabad Stock Exchange, Hyderabad.

Indore Stock Exchange, Indore.

Bangalore Stock Exchange, Bangalore.

FIVE-YEAR PLANS

Planning in India—The idea of planning in India was first conceived by the Late M. Visvesvaraiya in the wake of Russian Five-Year Plan in his book *Planned Economy of India*. This idea of planning was further taken up by the Indian National Congress which set up a *National Planning Committee* under Late Jawaharlal Nehru. But this Committee's work remained unfulfilled due to the 'Quit India' Movement launched by the Congress in 1942 and the Second World War. The Government of India was, however, doing some spade work under the *Department of Planning and Development* organised by Sir Ardeshir Dalal of Bombay. Other Planning programmes were also conceived by several bodies, such as *Bombay Plan* drawn up by eight industrial magnets of Bombay, *Peoples' Plan* drawn up by late M. N. Roy, the *Gandhian Plan* by S. N. Agarwal etc., etc. When India became independent in 1947, the Government of India appointed in

March 1950, a *Planning Commission*. This Commission has carried out three Five-Year Plans.

Beginning of the Five-Year Plans—Five-Year Plans operate in terms of the Directive Principles of State Policy as laid down in the Indian Constitution. India's Plans require the State to play an active role in economic development. The State has to initiate development on a broad front. It must plan its own investment and influence and regulate economic activity within the private sector so as to ensure the co-ordinated development of all available resources. Within the broad principles implied in the Five-Year Plans, private enterprise has been assigned an important role in development.

The goal of a socialistic pattern of society involves special emphasis on the needs of small producers and envisages a rapidly growing co-operative sector in medium and small-scale industry, trade and distribution and in many fields of social services.

The industrial policy of the Government as defined in the Industrial Policy Resolution of 1956, is not meant to imply that they are being placed in water-tight compartment. In practice, the policy has been operated in a flexible manner.

India's Plans need capital which has to be mobilised from internal savings and through assistance from abroad.

The Planning Commission was set up in March 1950. A draft outline of the First Five-Year Plan was presented by the Commission in July 1951. The final Plan came in December 1952.

The First Plan covers the five financial years from 1951-52 to 1955-56; the Second Plan from 1956-57 to 1960-61 and the Third Plan from 1961-62 to 1965-66.

Central Objective of the Plans—The central objective of planning in India is to raise the standards of living and opening out to the people new opportunities for a richer and more varied life. It must, therefore, aim both at using more effectively the available human and material resources and at reducing inequalities in income, wealth and opportunity. Economic planning has to be viewed as "an integral part of a wider process aiming not merely at the development of resources in a narrow technical sense, but at the development of human faculties and the building up of an institutional framework adequate to the needs and aspirations of the people."

FIRST PLAN

Major Objectives—The immediate aim of the Plan was to provide answer to the problems of high and rising prices, shortages of raw materials and of essential consumer goods and the relief and rehabilitation of displaced persons. The long-term objective was to initiate a process of planned economic development. It laid emphasis on irrigation, power and transport and aimed at creating more rapid economic and industrial advance in the future. It also initiated some of the basic policies by way of social change and institutional reform.

An outlay of Rs. 20,000 million (later increased to Rs. 24,000 million) was proposed for the public sector. This together with an

estimated investment of Rs. 16,000 million in the private sector was expected to lead to an 11 per cent increase in national income. Investment in the economy rose from an annual rate of Rs. 4,500 million in 1950-51 to about Rs. 6,750 million in 1955-56, i.e. from 5 p.c. to 7 p.c. of national income.

Achievements—National income in 1955-56 was 18.4 p.c. higher than that at the beginning of the Plan. Agricultural production increased by 22 per cent; industrial production went up by 39 p.c.; production of capital goods rose by 70 p.c. and that of intermediate goods and consumer goods by 34 p.c. each.

FIRST PLAN OUTLAY IN THE PUBLIC SECTOR

(In Rs. million)

1951-52	2,596	1954-55	4,759
1952-53	2,676	1955-56	6,139
1953-54	3,430		
Total			19,600

PATTERN OF FIRST PLAN OUTLAY IN THE PUBLIC SECTOR

	Plan provision (In Rs. million)	Actual Outlay (In Rs. million)
Agriculture & Community Development	3543	2899
Irrigation & Power	6475	5829
Industries and Mining	1882	968
Transport & Communications	5701	5178
Social Services	5316	4119
Miscellaneous	860	617
Total	2,377	1,9600

In the First Five-Year Plan, food and raw materials were given the highest priority. It meant a heavy outlay on *agriculture, irrigation and power* and a limited investment in *industries*. In *social services*, limited resources were available.

Results—The targets in terms of developmental outlay were fully realised in the case of private sector. But in public sector, the position was not satisfactory.

SECOND PLAN

Major Objectives—(1) a sizeable increase in national income so as to raise the standard of living in the country; (2) rapid industrialisation with particular stress on the development of basic and heavy industries; a large expansion of employment opportunities; and (4) reduction of inequalities in income and wealth and more even distribution of economic power.

The Plan proposed an outlay of Rs. 48,000 million in the public sector, of which Rs. 38,000 million was to be invested. Investment in the private sector was estimated at Rs. 24,000 million. Total investment in the Second Plan was twice that in the First Plan. The rate of investment was to increase from 7 per cent of national income in the first year of the Plan to 11 per cent by the end of the Plan. A more rapid rate of growth of national income than that achieved in the First Plan was aimed at—5 p.c. per annum against 3.5 per cent in the First Plan.

The Plan laid particular stress on industrialisation, such as, increased production of iron and steel and of heavy chemicals including nitrogenous fertilizers and development of heavy engineering and machine-building industries; modernisation and re-equipment of important industries like cotton textile, jute & sugar, etc.

Achievements—Second Plan came into operation on April 1, 1956. But the Plan met with serious difficulties from the very beginning. The causes were : (1) Fall in food production (2) Foreign Exchange crisis (3) Fall in industrial production (4) Lack of financial resources (5) Rise in the cost of progress (6) Fall in small savings and loans (7) Rise in prices.

All these circumstances compelled the Planning Commission to revise the Plan programme in the light of unexpected setback. So the Planning Commission works and revised allocations on the basis of original outlay of Rs. 4,800 crores.

The Second Plan came to a close in March, 1961. National income over the period of the Plan increased by 20 per cent. Industrial production went up by some 41 per cent and agricultural production by nearly 20 per cent. The rate of investment has increased from 8 per cent at the beginning of the Plan to about 11 per cent.

Taking two plan-periods together, agricultural production shows a rise of about 46 per cent; industrial production shows a rise of about 95 per cent. National income has grown by 43 per cent and per capita income by about 18 p.c. A significant increase has occurred in the rate of investment : from 5 to 11 per cent of the national income.

Other Achievements :

1. Steel capacity of nearly 4½ million tons has been built up.
2. Power capacity has increased by nearly two and a half times.
3. Railways are carrying over 50 per cent more traffic than they did 10 years ago.

SECOND PLAN OUTLAY IN PUBLIC SECTOR

1956-57	..	..	..	6,350
1957-58	..	..	..	8,900
1958-59	..	..	..	10,180
1959-60	..	..	..	10,120
1960-61	..	..	..	11,170
Total	..	..	..	46,720

PATTERN OF SECOND PLAN OUTLAY IN PUBLIC SECTOR
(In Rs. million)

	Plan Provision	Actual Outlay
Agriculture & Community Development ..	5,680	5,490
Irrigation & Power ..	9,130	8,820
Industry & Mining ..	8,900	11,250
Transport & Communications	13,850	12,610
Social Services and Misc. ..	10,440	8,550
Total ..	48,000	46,720

INVESTMENT IN PUBLIC & PRIVATE SECTORS (2ND PLAN)

(Amount in Rs. million)

	Public Sector	Private Sector	Total
Agriculture & Community Development ..	2,100	6,250	8,350
Major & Medium Irrigation ..	4,200	*	4,200
Power ..	4,450	400	4,850
Village & Small-scale Industries ..	900	1,750	2,650
Organised Industry & Minerals ..	8,700	6,750	15,450
Transport & Communications ..	12,750	1,350	14,100
Social Services & Miscellaneous ..	3,400	9,500	12,900
Inventories ..	..	5,000	5,000
Total ..	36,500**	31,000†	67,500

*Included under Agriculture and Community Development.

**According to later estimates, investment in the public sector is likely to be Rs. 37,310 million.

†Excludes transfer (Rs. 2,000 million) from public to private sector.

THIRD PLAN

Major objectives of the Third Plan started in April, 1961, are :—

- (1) to secure a rise in national income of over 5 p.c. per annum.
- (2) to achieve self-sufficiency in foodgrains and increase in agricultural production to meet requirements of industry and exports.
- (3) to expand basic industries like steel and chemicals, fuel and power and establish machine-building capacity for further industrialisation within a period of 10 years or so, mainly from the country's own resources.
- (4) to utilise to the fullest extent the man-power resources of the country and to ensure substantial expansion in employment opportunities.

(5) to establish progressively greater equality of opportunity and to bring about reduction in disparities in income and wealth and a more even distribution of economic power.

Plan Outlay—The plan outlay in the public sector will be about Rs. 75,000 million; in addition, Rs. 41,000 million is in investment in the private sector. The rate of investment is expected to go up from 11 p.c. at present to 14 p.c. by the end of the Plan. The Plan proposes additional taxation of Rs. 17,100 million in five years. The foreign exchange requirements for the plans of the public and private sectors together are placed at Rs. 21,000 million. This is apart from the commodity assistance of over Rs. 6,000 million already negotiated and Rs. 5,000 million needed for the re-financing of maturing external obligations.

PATTERN OF PLAN OUTLAY & INVESTMENT

Public & Private Sectors

(In Rupees million)

	Total sector	Current outlays (public)	Investment (Public Sector)	Private investment	Total investment
Agriculture & Community Development*	10,680	4,080	6,600	8,000	14,600
Major & Medium Irrigation	6,500	..	6,500	**	6,500
Power	10,120	..	10,120	500	10,620
Village & Small-scale Industries	2,640	1,140	1,500	2,750	4,250
Organised industries & Minerals	15,200	..	15,200	10,500	25,700
Transport & Communications	14,860	..	14,860	2,500	17,360
Social Services & Misc.	13,000	6,780	6,220	10,750	16,970
Inventories	2,000	..	2,000	6,000	8,000
Total	75,000	12,000	63,000	41,000	10,400

*Including minor irrigation.

**Included under agriculture and community development.

THREE PLANS AT A GLANCE

(In Rs. crores)

		<i>First Plan Actuals</i>	<i>Second Plan Actuals</i>	<i>Third Plan Targets</i>
Public Sector Outlay	..	1,960	4,672	7,500*
Total investment	..	33.60	6,831	10,400
Public sector	..	1,560	3,731	6,300
(As p.c. of total)	..	(46.4)	(54.6)	(60.6)
Private sector	..	1,800	3,100	4,100
(As p.c. of total)	..	(53.6)	(45.4)	(39.4)

Increase in real national income Increase in real per capita income

		<i>P.c.</i>			<i>P.c.</i>
1st Plan	..	18.4	1st Plan	..	8.2
2nd Plan	..	20.4	1st & 2nd Plans	..	17.5
1st & 2nd Plans	..	42.6	2nd Plan	..	8.6
3rd Plan (target)	..	30.0	3rd Plan (target)	..	17.0

Increase in Agricultural Production Increase in Industrial Production

		<i>P.c.</i>			<i>P.c.</i>
1st Plan	..	22	1st Plan	..	39
2nd Plan	..	20	2nd Plan	..	41
1st & 2nd Plans	..	46	1st & 2nd Plans	..	95
3rd Plan (target)	..	26	3rd Plan (target)	..	69

OUTLAY UNDER THREE PLANS

(In Rs. crores)

		<i>First Plan Actual</i>	<i>Second Plan Targets</i>	<i>Actuals</i>	<i>Third Plan Pro- gramm Outlay</i>	<i>Finance Pro- vision</i>
Agriculture & Community Development	..	290	568	549 (481)	1,090 (125)	1,068 (125)
Irrigation & Power	..	583	860	430 (66)	661 (18)	650 (18)
Village & Small Industries	42	200	187 (106)	264 (123)	264 (123)	264 (123)
Organised Industries & Mining	..	55	880	938 (899)	1,882 (1,802)	1,520 (1,450)
Transport & Communications	..	518	1,345	1,261 (1,069)	1,655 (1,370)	1,486 (1,225)

*Financial Provisions.

Miscellaneous	..	473	947	855	1,527	1,300
Inventories	..	—	—	(337)	(525)	(350)
					200	200
					(200)	(200)
Total	..	1,960	4,800	4,672	8,299	7,500
				(2,542)	(4,276)	(3,600)

External Assistance Utilised

Additional Taxation

	Rs. million		Rs. million
1st Plan ..	1,966	1st Plan ..	2,550
2nd Plan ..	8,850	2nd Plan ..	10,520
1st & 2nd Plans ..	10,816	1st & 2nd Plans ..	13,070
3rd Plan (estimates) ..	24,750	3rd Plan (target) ..	17,100

FOURTH PLAN

Long-term Objectives of the Fourth Five-Year Plan—(1) To play a sound foundation for self-sustaining economic growth; (2) To provide avenues and opportunities for employment to all those who seek it; (3) To narrow economic and social disabilities and (4) To ensure a minimum standard of living.

Aims of the Fourth Five-Year Plan—(1) Achieving a rate of growth of not less than 5 p.c. per annum in agriculture and an overall rate of growth of not less than 6 p.c.; (2) Ensuring the availability of inputs for agriculture, such as fertilizers, manures, pesticides and improved seeds etc. (3) Enlarging the supply of essential consumers goods, such as cotton textiles, sugar, kerosine, cement etc.; (4) Providing for continued growth in metals and mining, chemicals, machine building, electric power and transport; (5) Raising productivity through development of human resources; (6) Controlling the growth of population through an extensive family planning programme and (7) Generating adequate opportunity for employment of the new entrants to the labour force.

Outlay for Plan—The size of the Plan is Rs. 21,500. The earlier idea of a range for the Fourth Plan up to Rs. 22,500 crores was dropped after a 2-day discussion of the Planning Commission on the Fourth Plan on August 11, 1965. Outlay in the public sector is between Rs. 14,500 and Rs. 15,500 crores. The development programmes in each sector will identify projects with a total outlay of Rs. 1,000 crores to be initiated during the second half of the Plan if the economy improves and resources can be mobilised.

The "resources in sight" amounted to Rs. 20,850 crores, including the additional sum of Rs. 3,000 crores to be raised, mostly through taxation. This would still leave another Rs. 650 crores to be raised. A part of this amount also may have to be raised through taxation. In effect, therefore, the total resources effort demanded of the country in various ways for a Plan of Rs. 21,500 crores is of the order of Rs. 3,650 crores.

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Sectional Allocations—The top priority is to be given to agriculture and a concerted programme for family planning. Though there had been substantial increase in agriculture and social services, the provisions for major irrigation, transport and industry had not been stepped up adequately. Agricultural development should be given the highest priority in the Fourth Plan and a rate of growth not less than 5 p.c. should be achieved.

Union Budget, 1965-66 and the Fourth Plan—Outlay of the Plan will rise and reach a total of Rs. 2,225 crores, of which the Central Plan accounts for Rs. 1,198 crores. The total is Rs. 241 crores more than the current year. The bulk of the Plan expenditure is to be financed from capital receipts totalling Rs. 1,114 crores—foreign aid, expected to be Rs. 669 crores, and public borrowings which are likely to decline by about Rs. 28 crores.

EVENTS IN 1965

NATIONAL

Jan. 1 : Union Home Minister Nanda exposes left C.P.I.'s collusion with China. Over 500 Left Communists were arrested throughout India under the Defence of India Rules on December 30, 1964.

Jan. 6 : 69th Session of the Indian National Congress met in Durgapur.

Jan. 14 : Union Cabinet Committee report went against Orissa leaders, Mr. B. Patnaik and Mr. Biren Mitra.

Jan. 26 : Hindi became official language of the Union.

Jan. 28 : Schools and Colleges in Madras State were closed due to Anti-Hindi agitation.

Jan. 30 : Mr. Biren Mitra Chief Minister of Orissa resigned.

Feb. 6 : Pratap Singh Kairon, former Chief Minister of Punjab, was shot dead near New Delhi.

Feb. 10 : Anti-Hindi agitation took a bad turn in the South, many died in police firings.

Feb. 11 : Mr. C. Subramaniam, Food Minister and Mr. O. V. Alagesan, Minister of State resigned from the Union Cabinet owing to differences of opinion over the language policy.

Feb. 12 : Hartal throughout S. India : Anti-Hindi agitation again took a violent turn resulting in shooting in several places and deaths.

Feb. 16 : Mr. C. Subramaniam and Mr. Alagesan withdrew their resignations.

Feb. 18 : Mr. Sadasiba Tripathy was unanimously elected leader of the Orissa Assembly and succeeded Mr. Biren Mitra as Chief Minister.

Feb. 24 : The Congress Working Committee and Chief Ministers of States unanimously agreed to amend the Official Languages Act and implement Mr. Nehru's assurances.

Mar. 5 : Kerala Elections ended with no parties securing absolute majority.

Mar. 7 : Sheikh Abdullah met President Nasser of U.A.R. in Cairo.

Mar. 16 : An Opposition no-confidence motion in the Lok Sabha was defeated by an overwhelming majority.

Mar. 18 : The Kerala Governor reported to the Centre that no party was in a position to form a Government in the State.

April 1 : Sheikh Abdullah met Mr. Chou En-lai in Algiers.

April 20, Pakistan attacked Kutch.

April 24 : King Mahendra of Nepal inaugurated the Kosi Bridge; Pakistani forces fell back in Kutch.

April 26 : Defence Minister Chavan announced that Indian forces were put on the alert to meet Pakistani aggression on all sides.

April 28 : Nearly 400 miners were killed in a coal mine explosion in Bihar.

May 5 : India and Pakistan agreed on Kutch cease-fire.

May 7 : Lok Sabha approved continuance of President's rule in Kerala.

May 8 : Sheikh Abdullah arrived in India and was interned in Ootacamund under D.I.R.

May 12 : Prime Minister Shastri arrived in Moscow on a State visit.

June 15 : Prime Minister Shastri went to London for Commonwealth Prime Ministers' Meeting.

June 24 : Indian troops withdrew from the Kargil area in Kashmir on U.N. assurances.

June 30 : India and Pakistan signed cease-fire agreement in the Rann of Kutch dispute.

August 5 : Armed Pakistani raiders infiltrated into Kashmir in huge number.

August 16 : India re-occupied Kargil (Kashmir) posts to check raiders.

August 23 : Mr. M. R. Masani moved a no-confidence motion against the Central Government in Lok Sabha (defeated on August 26).

August 25 : Indian troops crossed cease-fire line in Kashmir.

August 30 : Many Pakistani raiders were killed in the Uri-Poonch area.

Sept. 1 : Massive Pakistani attack in Chhamb area in Kashmir began : Indian Air Force went into action and destroyed 10 Pakistani tanks.

Sept. 3 Pakistani aggressors stopped in Chhamb.

Sept. 5 : Indian Army marched on Lahore from Punjab.

Sept. 6 : President Ayub Khan declared "State of War"; and Emergency was proclaimed throughout Pakistan.

Sept. 8 : Pakistani planes bombed civil areas in Jamnagar, Pathankot etc.

Sept. 9 : Pakistani Navy attacked Dwarka ; many Pakistani tanks were destroyed in tank battle in Khem Karan.

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Sept. 13 : U. Thant, U.N. Secretary-General, conferred with President Radhakrishnan, Prime Minister Shastri and others on Indo-Pakistan war.

Sept. 14 : I.A.F. attacked W. Pakistan ; Pakistani planes raided civil areas in W. Bengal, Assam and Tripura.

Russia warned other nations not to help Pakistan against India and thus aggravate the situation.

Sept. 15 : President Ayub Khan rejected U.N.'s truce terms.

Sept. 17 : U.S. warned China not to intervene in the Indo-Pakistan conflict.

China warns India to dismantle all military installations on the Sikkim-China border within 3 days or face "grave consequences."

Sept. 18 : Pakistani planes bombed Army Hospital at Ambala.

Sept. 19 : Gujarat, Chief Minister Balwantrai Mehta's plane was shot down by a Pakistani plane. He died with his wife and several others.

Peking extends by three days the dead-line for India for dismantling the alleged military structure on Sikkim-China border.

Sept. 20 : U.N. Security Council demanded cease-fire between India and Pakistan. India accepted the Security Council's terms for cease-fire.

Sept. : 22 The Indo-Pakistan war ended ; U.N. call for cease-fire was accepted by India and Pakistan.

Sept. 23 : Cease-fire came into force from 3.30 am.

Sept. 28 : Mr. Hitendra Desai was elected to be Chief Minister of Gujarat.

Oct. 2 : Exchange of fire took place between India and China with the result Chinese intruders suffered casualties.

Oct. 25 : India walked out of the U.N. Security Council meeting as a protest against Pakistan insistence to discuss Kashmir's questions.

Dec. 10 : Prime Minister Shastri announced the holding of talks with President Ayub in Tashkent on January 4.

Dec. 29 : First tank from the Avadi tank factory rolled out.

Dec. 31 : Mr. T. T. Krishnamachari resigned as Union Finance Minister.

INTERNATIONAL

Jan. 3 : Mr. Ayub Khan was elected President of Pakistan.

Jan. 5 : Indonesia withdrew from the U.N.

Jan. 20 : President Lyndon Johnson was sworn in as the 36th President of U.S.A.

Jan. 24 : Sir Winston Churchill, the former Prime Minister of England died.

March 18 : Russian cosmonaut floated in space and took pictures of earth.

May 13 : U.A.R. broke off diplomatic relations with West Germany.

May 15 : China exploded its second Atom Bomb.

June 19 : President Ben Bella deposed in a coup in Algeria.

July 18 : Russia launched space station from a satellite.

August 29 : Gemini-V Astronauts landed after a full 8-day orbit.

Sept. 5 : Dr. Albert Schweitzer died.

Oct. 5 : Pakistan broke oc diplomatic relations with Malaysia.

Pope Paul addressed the U.N. Assembly to stop all wars and to proceed with disarmament.

Nov. 2 : Russian launched Port on-2, the heaviest space vehicle ever put into orbit.

Nov. 11 : Rhodesia seized Independence and Britain retailed by dismissing Mr. Ian Smith and all his Ministers.

Nov. 15 : U.N. General Assembly turned down the proposal for a seat to China in the U.N.

Nov. 25 : Mobutu takes over in a bloodless coup in the Congo ; President Kasavubu deposed.

Dec. 9 Soviet President, Mr. Anastas Mikoyan, steps down, Mr. Nikolai Podgorny, is named as the new Soviet President.

Dec. 16 : U.S. Astronauts had a rendezvous in space—the two Gemini spaceships piloted by them came to as near as one foot.

Dec. 21 : Mikoyan resigned as Soviet President ; Podgorny becomes new head of State.

EXTERNAL LOANS AND AIDS

India has been receiving from friendly foreign countries and the World Bank, loans and aids for her development plans in many forms, such as economic and technical aid, supply of agricultural commodities and local currency assistance out of the sale proceeds of imported commodities, etc. In broad terms, foreign aid utilised in the First Plan was 6 per cent of the total investment. The proportion was about 13 per cent in the Second Plan excluding Public Law 480 of the U.S.A. In the Third Plan, external assistance is expected to be about a fourth of the total investment.

The role of external assistance in the implementation of the Five-Year Plans has been stated as follows—"the role of external assistance in relation to the Plan will be to supplement the real resources of the country with commodities for which additional demand will be generated in the process of development but the domestic supplies of which are limited. External assistance would help to avoid dislocation and to maintain a certain measure of stability in the economy."

TOTAL FOREIGN LOANS TO END OF 1964

Mr. T. T. Krishnamachari, former Finance Minister, stated in the *Lok Sabha* on March 25, 1965, that up to Jan. 1, 1965, loan agreements had been signed with foreign Governments and international institutions, aggregating Rs. 33,296,500,000 (almost £2,500,000,000 or \$7,000,000,000).

Of this total, Rs. 11,213,500,000 had been provided by the United States; Rs. 4,050,800,000 by West Germany; Rs. 3,836,100,000 by the Soviet Union; Rs. 4,034,100,000 by the World Bank; Rs. 3,219,600,000 by the United Kingdom; Rs. 2,309,300,000 by the International Development Association; Rs. 1,449,600,000 by Japan; Rs. 641,800,000 by Italy; Rs. 631,000,000 by Czechoslovakia; Rs. 476,100,000 by France; Rs. 431,600,000 by Canada; Rs. 298,000,000 by Poland; Rs. 190,500,000 by Yugoslavia; Rs. 157,800,000 by the Netherlands; Rs. 152,500,000 by Switzerland; Rs. 95,200,000 by Belgium; Rs. 61,100,000 by Austria; Rs. 24,100,000 by Denmark; and Rs. 21,800,000 by Sweden.

Figures published on Feb. 24, 1965, showed that India's foreign loan debt outstanding at Dec. 31, 1964, amounted to Rs. 23,234,300,000 (£1,742,500,000 or \$4,879,200,000) and that during the period of the Fourth Five-Year Plan beginning in 1966, the estimated repayment of principal would be Rs. 6,870,000,000 (£515,250,000 or \$1,442,700,000), while interest charges would amount to Rs. 4,360,800,000 (£327,060,000 or \$915,768,000).

On September 15, 1965, Mr. B. R. Bhagat, former Minister of State for Finance said that India owed Rs. 3,304 crores to foreign countries as principal

loan and interest upto July 1965. Of this, the loan amounted to Rs. 2,499 crores and the remaining Rs. 805 crores was the interest.

DESCRIPTION OF LOANS AND CREDITS

I.B.R.D. loans are granted only to finance foreign exchange requirements of specific projects of reconstruction and development. The assistance is generally confined to railways, river valley projects, generation of electricity, production of steel, development of ports, etc. The rate of interest charged by I.B.R.D. usually varies from $3\frac{1}{2}$ to 6 per cent and maturity period of loans usually varies from 10 to over 25 years.

Development Loan Fund (D.L.F.) loans have an under-coverage which includes rail and road transport, equipment for a number of industries, such as textile, sugar, paper and paper-board, steel for both public and private sectors, power projects, etc. The loans received from D.L.F. can be repaid in rupees and the period of repayment extends from 15 to 20 years. The interest charges are generally from $3\frac{1}{2}$ to $5\frac{1}{4}$ per cent.

The loan from Export-Import Bank of the U.S.A. is generally available for procurement in the U.S.A. of capital equipment. It carries the interest at $5\frac{1}{4}$ p.c. and is for a term of about 16 years. The loan has to be paid in dollars.

International Development Association (the affiliate of the World Bank) extends loans on very favourable terms and conditions: they are repayable in 50 years including a grace period of 10 years and carry only a small service charge of $\frac{1}{4}$ per cent per annum.

West German Aid is meant for the purchase of capital goods and equipment. The rate of interest is 6 per cent in addition to an administrative charge of 0.3 per cent. A part of the aid from West Germany is not tied to any specific purposes.

Japan's Yen Credit—Japan granted first yen credit amounting to Rs. 3.8 crores for allocation for import of equipment in both public and private sectors for projects like National Coal Development Corporation, Rajasthan Canal Projects, etc. The interest is at the rate of $5\frac{1}{4}$ to 6 p.c. and the period of repayment extends to 13 years. Second yen credit amounting to about Rs. 3.81 crores is meant for Orissa Iron Ore Project.

BRITISH ECONOMIC AID

There are numerous economic links between Britain and India in the field of trade, commerce and industry. To these, in the last few years, has been added considerable direct lending by the British Government to the Govt. of India. These British credits have been designed to help India's development plans and have been channelled to the public and private sectors of the Indian economy.

British aid has been made through its membership of the Aid India Consortium. This group of countries and the World Bank, numbering 11

in all, meets annually to consider India's capital needs under the current Plan. The Consortium first met during the Second Five-Year Plan and Britain was its founder-member. More countries have joined the Consortium since then.

Since Britain began her aid Programme to India in 1958 she has taken a lead in easing the terms of loans. It was announced in November 1965 that loans to India subsequently signed by Britain would be interest-free and that repayment of the principal would not start until after the expiry of the first seven years of the 25-year term of the loans.

In the Second Plan, British aid totalled £80.5 million, including £15 million (Rs. 20 crores) for the Durgapur Steel Works, £3 million (Rs. 4 crores) for the Assam Pipeline Project and £62.5 million (Rs. 83.3 crores) as General Purpose Aid. For the Third Plan Britain has pledged £185 million (Rs. 246.3 crores).

Commitments in the Third Plan have taken three main forms:—

(i) *Project Aid*—Aid linked to specific projects totals £81 million (Rs. 108 crores).

(ii) *Non-Project Aid linked to specific imports*—This includes credit of £3.5 million (Rs. 4.7 crores) for the purchase of steel plates and other steel products and also includes credits totalling £2.5 million (Rs. 3.3 crores) to provide British equipment for the expansion of British-oriented private-sector industries.

(iii) *General Purpose Aid*—So far £100.5 million (Rs. 134 crores) has been provided.

Colombo Plan Aid—Britain is the second largest contributor of aid under the Colombo Plan for Co-operative Economic Development in South and South-East Asia. The Colombo Plan was designed as a framework within which an international co-operative effort could be promoted to assist developing countries of South and South-East Asia to raise their living standards.

During the Colombo Plan year 1964-65, Britain provided £46.97 million (Rs. 22.6 crores) in capital aid and technical assistance for development in South and South-East Asia, bringing the total of such expenditure since the beginning of the Colombo Plan in 1951 to £347.37 million (Rs. 455.16 crores).

Last year, the British Government's expenditure in technical assistance was £1.97 million (Rs. 2.63 crores), bringing the total since 1951 to £14.36 million (Rs. 19.15 crores).

Some Principal Works—1. *Durgapur Steel Works*—A consortium of 13 British engineering companies banded together under the title of ISCON (The Indian Steel Works Construction Co.), and signed the contract in October, 1956, to carry out the biggest single overseas engineering project ever planned by British industrialists. Out of the final cost of about £139 million (Rs. 185 crores), sterling expenditure accounted for at least £70 million (Rs. 93.3 crores). The British Government lent to India

a total of £15 million (Rs. 20 crores), London banking houses provided £11 million (Rs. 15.3 crores) and the Government of India allocated a further £31 million (Rs. 41.3 crores) from successive British general purpose loans, to help meeting this call on foreign exchange.

The plan of the steel works included provision for expansion of the output capacity from one million tons of ingot steel a year to 1.6 million tons. Loans by the British Government will account for more than half the £42 million (Rs. 56 crores) required. Britain is also discussing terms and conditions for providing aid to raise the annual capacity to 3 million tons of ingot steel.

Under the Colombo Plan, Britain has also provided and paid for training facilities in iron and steel companies in Britain for 400 of senior supervisory staff and technicians at the Durgapur Steel Works. In addition, the British Iron and Steel Federation arranged for as many as 100 British engineers and technicians at any one time to be employed by Hindustan Steel Ltd.

2. *Heavy Electricals Ltd., Bhopal*—Another important project in the public sector built with British collaboration is the heavy electrical plant factory at Bhopal. This Factory was opened in November, 1960.

3. *Chemicals and Fertilizers*—An important British concern has taken a leading part in India's industrial development—Imperial Chemical Industries (I.C.I.). Although this famous firm are not themselves producing fertilizers in India, they acted as 'midwife' at the birth of India's growing nitrogenous fertilizer industry because they were consultants to the Government of India for Sindri. Their second link with the public sector was established when the first commercial explosives plant was built in Bihar in 1955 as a joint enterprise. Polythene and other chemicals in association with the Alkali & Chemicals Corporation and dye-stuffs in collaboration with Atul are being manufactured by I.C.I.

4. Another great British name in the fertilizers is *Fisons* which has association with Tatas in the manufacture of pesticides.

5. *Bakelite Ltd.* and *Formica Ltd.* (of the Dela Rue group) manufacture finished plastic products in collaboration with Hyderabad Laminated Products and the Bombay Burmah Corporation Ltd. respectively.

6. Two of the three types of private vehicles now being produced in India are manufactured in collaboration with the British firms—the 'Ambassador' through the agreement between the *British Motor Corporation Ltd.*, Birmingham and Hindustan Motors Ltd., Calcutta, and the 'Standard Herald' manufactured in collaboration between *Standard Motors*, Coventry and Standard Motor Products of India Ltd., Madras.

U. S. ECONOMIC ASSISTANCE TO INDIA

U. S. economic assistance to India consists of both grants and loans. The total commitments of the United States under various

agreements with the Government of India now stand at \$ 6,151.6 million (Rs. 2,929.3 crores).

American assistance to India is at present extended through the following three agencies :

U.S. Agency for International Development (U.S.A.I.D.):

This Agency was created on November 3, 1961 to bring American economic assistance under a unified administration. It is in charge of activities previously administered by the International Cooperation Administration, which was represented in India by the Technical Cooperation Mission (TCM); the Development Loan Fund; the Food for Peace Programme (Public Law 480) in its relation with other countries; and other staff and related functions.

U.S.A.I.D. gives both development loans and grants. Grants have been made to the Malaria Eradication Programme, smallpox eradication, higher education, National Productivity Council, craftsman training, dairy development, community development, crop production and a number of other projects. U.S.A.I.D. and its predecessor, TCM, have also aided India by making available American experts to work in specific technical and economic problems in the Indian development programme, by giving advanced training to Indian participants both in India and abroad, and by the provision of supplies and equipment. The names of the principal divisions of U.S.A.I.D. (Agriculture, Industry, Health, Education, Labour and Management) indicate the comprehensive scope of its activities. Development grants total \$ 378.1 million (Rs. 180.00 crores). These, of course, do not involve repayment.

The 35 development loans extended by U.S.A.I.D. since its establishment in November 1961 total \$1,376.7 million (Rs. 655.6 crores). These loans are repayable in dollars, but in order to avoid an excessive foreign exchange debt servicing burden to India, the terms of the loans are set at a long period, taking into account such factors as other foreign debt and the foreign exchange earnings of the country. Repayment is scheduled over 40 years, including a 10-year grace period; that is, no payments of principal during the first ten years.

The 22 loans authorized through 1963 are free of interest and carry a credit fee of three quarters of one per cent per annum. The foreign aid legislation enacted by the U.S. Congress for the Fiscal Year 1964, effected a light change in the terms of these loans: instead of a credit fee they are now subject to payment of interest at three quarters of one per cent during the first ten years and at two per cent during the remaining thirty years. Ten loans were authorized in India under these terms. The legislation that was passed for the Fiscal Year 1965, established a minimum interest rate during the first ten years of development loans of one per cent per annum and of two and one-half

per cent thereafter. So far three loans have been authorized in India under the new terms.

Prior to November 1961, the Technical Cooperation Mission had given the Indian Government loans totalling \$ 154.2 million (Rs. 73.4 crores). These could be repaid in either rupees or dollars at the option of the Government of India. For the sake of simplicity, a sum of \$ 5.8 million (Rs. 2.8 crores) which was made available to the Government of India in the form of Italian, French and Japanese currencies in exchange for Indian rupees is included in this item.

The U.S. Development Loan Fund, which has now been absorbed into U.S.A.I.D., extended loans to India totalling \$ 509.2 million (Rs. 242.5 crores) between 1958 and September 30, 1961. These loans are repayable in non-convertible rupees.

Public Law 480 (Food for Peace) Programme: Public Law 480 which is playing a significant role in ensuring the availability of agricultural commodities to India at reasonable prices at a time of intense economic development, has four titles (or chapters)

Under Title I of PL-480, the United States has entered into nine agreements with India for the supply of large quantities of wheat, rice, coarse grains, cotton, dried milk powder, tobacco and other agricultural commodities. India pays for these commodities in rupees. The total value of the commodities covered by those agreements is Rs. 1,386.4 crores (\$2,911.5 million). Of this, Rs. 170.5 crores (\$358.2 million) is reserved for U.S. Government uses; Rs. 100.4 crores (\$ 210.8 million) is reserved for U.S. Government uses; Rs. 100.4 crores (\$ 210.8 million) for loans to private enterprise under the Cooley Amendment; Rs. 375.3 crores (\$ 788.2 million) for grants to the Indian Government for development projects, and the balance of Rs. 740.2 crores (\$ 1,554.3 million) for loans to the Indian Government for the same purpose. Thus 87 per cent of the value of agricultural commodities supplied under Title I of PL-480 is utilized in financing irrigation dams, power projects, educational and research facilities, the malaria eradication programme, industrial enterprises and other development undertakings.

Title II of Public Law 480 enables the U.S. President to furnish emergency assistance to foreign countries in meeting famine or other urgent or extraordinary relief requirements. Under this title, India has received agricultural commodities worth \$15.8 million (Rs. 7.5 crores).

Under Title III of Public Law 480, \$204.5 million (Rs. 97.4 crores) worth of dried milk, wheat, rice, corn, cotton seed oil and other such commodities has been distributed in India through voluntary agencies. Some 80 lakhs school children receive free lunches through programmes assisted under this title.

Title IV provides for long-term credits to friendly nations for the purchase of agricultural commodities during periods of economic

development. Repayment in dollars could be spread over twenty years. No transactions have taken place between India and the United States under this title.

The Cooley Amendment to Public Law 480 (named after Congressman Harold D. Cooley, Chairman of the Committee on Agriculture of the U.S. House of Representative) provides that up to 25% of the local currency proceeds from the sale of American agricultural commodities shall be made available to U.S.A.I.D. for lending in the private sector to two categories of borrowers: (1) American firms or their subsidiaries operating in the host countries or indigenous firms having an affiliation with an American firm; (2) indigenous firms of the host countries with no American affiliation but which are facilitating the disposal of American agricultural products, e.g., local private warehouses storing grain or flour mills processing the grain, etc. The nine agreements between India and the United States under PL-480 provide for Rs. 100.4 crores to be given in loans to private enterprise under the Cooley Amendment.

The Export-Import Bank : The Bank has authorized 23 loans to India totalling \$ 406.4 million (Rs. 193.6 crores). The Bank extends loans and guarantees for the primary purpose of promoting the export and import trade of the United States. Loans given by it are repayable in dollars. In determining the rates of interest to be charged on loans, the Bank takes into consideration the maturity of the loans and the extent of credit risk to be assumed by the Bank as affected by such guarantees as may be offered, as well as prevailing United States commercial and government rates. For instance, the First Line of Credit of \$150 million to the Government of India authorized in 1958 carries an interest rate of $5\frac{1}{4}$ per cent. The principal is repayable in 20 semi-annual instalments beginning in January 1964.

The Wheat Loan : In 1951, the U.S. Congress enacted legislation for a loan of \$ 189.7 million (Rs. 90.3 crores) to India to finance the purchase of two million tons of wheat to meet an acute food shortage. The loan is repayable in dollars and carries an interest rate of $2\frac{1}{2}$ per cent. Repayment was scheduled to commence on June 30, 1957. However, in view of India's serious foreign exchange difficulties, the U.S. Government postponed the 18 semi-annual instalments of interest and principal due from December 31, 1959 and rescheduled them to fall due from December 1986 to June 1995, without additional interest payments.

To recapitulate, American economic assistance commitments to India total \$ 6,151.6 million (Rs. 2,929.3 crores). This consists of :

	<i>Dollars</i> <i>(Million)</i>	<i>Rupee</i> <i>equivalent</i> <i>(Crores)</i>	<i>P.c.</i> <i>of total</i>
1. Grants (not payable) ..	1,392.1	662.8	22.6
2. Loans repayable in dollars ..	1,872.7	939.5	32.1
3. Local currency repayments (This includes loans repayable in rupees or dollars; the Cooley Fund for loans to private enterprise; and amounts under PL-480, Title I, agreements re- served for U.S. Govern- ment uses) ..	2,786.8	1,327.0	45.3
Total: ..	6,151.6	2,929.3	100.0

It will be noted that only 32 per cent of the total American aid to India involves foreign exchange repayments. The greater part of this amount bears exceptionally low rates of interest and is repayable over a long period (40 years).

Nearly a quarter of the total aid represents grants. The remainder (45.3%) represents loans repayable in rupees. These repayments do not involve the utilization of India's foreign exchange earnings or the export of goods from this country.

SOVIET ECONOMIC AID

Economic and technical cooperation between the Soviet Union and India testifies to the concrete implementation of the principles of peaceful co-existence.

These relations began 10 years ago, in February 1955, when the first agreement on cooperation for the construction of the Bhilai Steel Plant was signed.

The USSR is at present helping India in building more than 40 big industrial and other projects in such vital branches of economy as iron and steel, heavy engineering, coal, oil, power etc.

The Soviet Union granted India long-term credits—totalling 383.8 crore rupees—to finance the delivery of machines and equipment for these projects, to bring Soviet experts to India for passing on technical know-how, and also to provide for the training of Indian personnel in the USSR. These credits will be paid back in the course of 12 years, through traditional Indian exports to the Soviet Union.

Of over 40 projects planned to be built with Soviet assistance, 7 are already in operation. These are: Bhilai Steel Plant, Oilfields at Ankleshwar, 5 blocks of the Thermal Power Station at Neyveli, Technological Institute in Bombay, Film Factory in Calcutta, Central

Mechanised Farm at Suratgarh and the first stage of the Oil Refinery at Barauni. Heavy Machine Building Plant at Ranchi and the Coal Mining Machinery Plant at Durgapur were commissioned in 1963.

The Soviet offer of collaboration in the construction of the fourth public sector steel plant at Bokaro was announced on May 1, 1964.

Another field in which the Soviet Union is giving assistance to India is that of pharmaceutical industry. According to the agreement concluded in 1959, the Soviet Union is co-operating with India in building a factory in Rishikesh (Uttar Pradesh). Under the same agreement the USSR is helping in the building of another factory in Hyderabad, and of yet another factory near Madras.

The USSR is giving India substantial assistance in the development of its public health system. A pediatrics research centre is subsidised by the Soviet Red Cross Society. The Soviet public health bodies have sent more than 200,000 doses of anti-polio vaccine, 250 million doses of anti-smallpox vaccine.

CONSORTIUM AIDS IN 1965-66

At a meeting in Washington on April 22, 1965 the Aid India Consortium has pledged an aid of 1.027 million dollars (Rs. 488.85 crores) to India for the final year of the Third Plan. Two-thirds of these loans will be in the form of grants and soft loans with a maturity of 25 years or more. About 50 per cent of the loan amount will be given as non-project aid.

Details of the dollar equivalents of amounts pledged for 1965-66, together with figures for 1964-65 and totals for the first four years (1961-62—1964-65), are shown in the following table:

		(Equivalent in U.S. \$)		
		1964-65	Four-year Total	1965-66
Austria	..	1,000,000	5,000,000	13,000,000
Belgium	..	—	4,000,000	20,000,000
Canada	..	41,000,000	41,000,000	132,500,000
France	..	20,000,000	20,000,000	100,000,000
W. Germany	..	95,000,000	86,000,000	558,500,000
Italy	..	36,000,000	36,000,000	134,000,000
Japan	..	60,000,000	60,000,000	230,000,000
Netherlands	..	11,000,000	11,000,000	33,000,000
U. K.	..	84,000,000	84,000,000	434,000,000
U. S. A.	..	435,000,000	135,000,000	1,850,000,000
World Bank & I.D.A.	..	245,000,000	245,000,000	940,000,000
Total	..	1,028,000,000	1,027,000,000	4,445,000,000

With these amounts, the Aid India Consortium has given total aid of 5,472 million dollars (Rs. 2,604.67 crores) for India's Third Plan.

OTHER FOREIGN AIDS

Australia—has been giving India grants under Colombo Plan Economic Development and Technical Assistance Programme.

New Zealand—New Zealand has been providing substantial capital assistance to India under the Colombo Plan.

Czechoslovakia—The Czech Government has extended to India credit amounting to Rs. 23.1 crores for the import of machinery and equipment.

France—During Second Five-Year Plan, the French Government had extended a suppliers' credit for financing the import of capital goods upto 25 billion French francs (about Rs. 24.1 crores), which later increased to 50 billion francs. Similar credits equivalent to Rs. 14.29 crores have been extended for the Third Plan projects. Services of experts and training facilities for Indian nationals in France have also been provided.

West Germany—Economic collaboration with the Federal Republic of Germany began in February, 1958 with the signing of an agreement for extending a credit of DM 660 million (Rs. 77.76 crores) for the Rourkela Steel Plant. Since then the credits, grants and technical assistance from the Republic have gone on increasing. The total amount of credits other than suppliers' credit committed during 1962-63, comes to DM 2,877.6 million (Rs. 342.55 crores).

Poland—The Government of the Polish People's Republic has so far extended two credits to India for a total amount of Rs. 29.8 crores.

Rumania—The Rumanian Government provided technical and financial assistance in the construction of the Oil Refinery at Gauhati on January 1, 1962.

Yugoslavia—In January, 1960, the Government of the Federal People's Republic of Yugoslavia agreed to extend to India a credit to Rs. 19.05 crores to facilitate the purchase of capital goods and equipment. Orders valued at Rs. 3.87 crores have already been placed.

BUDGET, 1966-67

UNION BUDGET

The Union Budget for 1966-67 levied additional taxes totalling Rs. 101.51 crores, nearly half of which will come from higher excise duties on sugar, cigarettes, diesel, fine varieties of cloth and some other items. The States' share of the additional excise revenue will be Rs. 10.07 crores. A flat special surcharge of 10% on personal income-tax will provide Rs. 25 crores. From the corporate sector, the budget hopes to gain an additional Rs. 36 crores mainly through a 10% rise in the general tax on corporate incomes. This is despite a string of relief measures aimed at providing incentives to investors and a fillip to the capital market.

The incentives include the dropping of the tax on bonus issues and the reduction of the rate of surtax from 40% to 35%. And the existing dividend-tax will now be leviable only on that part of the equity dividend declared or distributed which is in excess of 10% of the paid-up equity capital.

The Budget for 1966-67 would show a revenue surplus of Rs. 210 crores.

The total revenue receipts next year at the existing levels of taxation were estimated at Rs. 2,617 crores and expenditure on revenue account at Rs. 2,407 crores. The revenue surplus of Rs. 210 crores next year would thus be Rs. 72 crores less than the revised estimates for the current year.

As a result of the higher levies, overall deficit of Rs. 117 crores will be reduced to Rs. 25 crores, a gap should remain unfilled for the reason that mobilization of any additional resources would come in the way of "buoyancy of production and revival of confidence which are so urgently required."

The budgetary gap of Rs. 25 crores might have been lower but for the sizable share allotted to the States in the collections from the higher excise duties. The budget made a special effort to improve the finances of the States by two tax proposals.

The first increases the rate of Central sales tax on inter-State sales from 2% to 3%, while the second raises from 2% to 3%; the ceiling prescribed in respect of sales tax on goods declared to be of special importance in inter-State trade or commerce.

The two will together yield Rs. 34 crores a year, of which the share

of the States will be Rs. 17 crores. But since the new measures will come into effect only on July 1, 1966, the collections will be proportionately less next year; for the Centre it will mean an increase of only Rs. 50 lakhs in revenue towards reducing the Rs. 117-crore deficit to Rs. 25 crores.

On capital account, external borrowings would amount to Rs. 490 crores in the current year. Market loans had been assumed at Rs. 280 crores. Plan outlay for the Centre and the States is Rs. 2,081 crores.

Indirect Taxes—Excise duty on crystal sugar raised from Rs. 28.63 to Rs. 37 per quintal, with corresponding rises on *khandsari*. The Finance Minister expects incidence to be eight to nine paise per kg. The additional revenue expected is Rs. 21.93 crores.

Duty on cigars, cigarettes and unmanufactured tobacco for use in the manufacture of cigarettes and pipe mixtures raised by about 25 to 30%. The additional revenue expected is Rs. 9.01 crores. This will raise prices of more expensive brands by five paise per packet and of relatively cheaper ones by one to two paise.

Excise duty on light diesel oil raised by Rs. 60 per kilo litre, bringing it in line with other petroleum products. The additional revenue expected is Rs. 5.35 crores.

Selective increases in duties on finer qualities of cotton yarn and cotton fibres, such as mercerised, shrink-proof and organdie varieties. The additional revenue expected is on cotton yarn Rs. 7.23 crores, on fabrics Rs. 6.3 crores and rayon and synthetic yarns Rs. 50 lakhs.

Excise duties on sodium silicate and carbon dioxide raised and slab concessions on paper-boards reduced. This will yield an additional revenue of Rs. 1.46 crores.

The yield from optical bleaching agents and synthetic detergents is Rs. 58 lakhs.

The total yield is estimated at Rs. 52.86 crores including the State's share of Rs. 10.07 crores.

Central sales tax on inter-State sales raised from 2 to 3% from July. Existing 2% ceiling for sales tax on goods of special importance in inter-State trade raised to 3%.

Direct Taxes : 1. Individuals—Flat special surcharge of 10% of income-tax and surcharge in respect of earned and unearned incomes.

Existing limit of total income not chargeable to tax raised by Rs. 500 for all categories of assessees.

People earning less than Rs. 7,400 a year will benefit, those earning Rs. 7,400 annually will neither gain nor lose, while everyone else will have to pay more.

People with a monthly income of Rs. 375 have been paying Rs. 10 a year as income-tax; henceforth they will pay nothing. Those earning Rs. 500 per month, will save annually Rs. 14.

But the increase in the tax liability of the people in higher income brackets will be relatively steep.

Those earning Rs. 1,500 per month will have to pay annually Rs. 150 more than what they do now; the annual liability of those earning Rs. 2,000 a month will increase by Rs. 250.

With the existing maximum limits of small incomes exempt from tax being increased by Rs. 500 in the case of resident Hindu undivided families satisfying certain conditions, no income-tax will be payable on total incomes up to Rs. 6,500. In the case of other resident non-corporate assessees entitled to exemption, no income-tax will be payable on total incomes up to Rs. 3,500 (under the last Finance Act, the corresponding exemption limits are Rs. 6,000 and 3,000 respectively).

The amount of tax relied on account of personal allowances in the case of resident individuals and Hindu undivided families is being increased, in every case, by a sum of Rs. 25, calculated at the rate of 5% on an additional personal allowance of Rs. 500. Thus the relief will be Rs. 125 instead of Rs. 100 under the Finance Act, 1965 in the case of unmarried individual. For other categories of married individuals, the relief will be Rs. 200 instead of Rs. 175, Rs. 220 instead of Rs. 195 and Rs. 240 instead of Rs. 215.

Under the Bill, resident individuals married and having more than one dependent child will pay no tax for a total income of Rs. 4,500 (as against Rs. 10 during 1965-66), Rs. 11 as against Rs. 35 for an income of Rs. 5,000 and Rs. 121 as against Rs. 135 for a total income of Rs. 6,000. The tax will remain Rs. 275 for a total income of Rs. 7,400. Above this limit of total income, the tax rates have been raised for all slabs.

In regard to annuity deposits, the exemption limit for which has been raised from Rs. 15,000 to Rs. 25,000, the rates of deposits in respect of incomes chargeable to tax are the same as in the current year. The modification by raising the exemption limit will have effect also in relation to advance annuity deposits to be made during the financial year 1966-67.

Assessees whose total income is between Rs. 15,000 and Rs. 25,000 and who wish to make annuity deposits can do so if they send an intimation in writing to the income-tax officer by September 30 of the financial year immediately preceding the relevant assessment year.

The Bill provides for a special surcharge for purposes of the Union to be calculated at the rate of 10% of the aggregate amount of the income-tax and the amount of surcharges, if any, in relation to earned and un-

earned incomes. This special surcharge will be payable by all non-corporate assesseees including cooperative societies, registered firms and local authorities.

The limit of total income on which no tax is chargeable in the case of a co-operative society is proposed to be fixed at Rs. 3,500 as against Rs. 3,000 under the Finance Act, 1965.

The limit of total income on which no tax is chargeable in the case of a co-operative society is proposed to be fixed at Rs. 3,500 as against Rs. 3,000 under the Finance Act, 1965.

In the case of the Life Insurance Corporation of India, the rate of income-tax on its profits and gains from life insurance business has been increased from 47.5% to 52.5%. The proposed increase is in consonance with a similar increase proposed in the rate of income-tax on Indian companies in which the public are substantially interested. The rate of income-tax applicable to the other income of LIC will be the same as the rate of income-tax applicable to the total income of a domestic company in which the public are substantially interested.

In the case of companies, the rate schedule and the tax mechanics have been completely recast and simplified under the Bill. The rates of income-tax for various classes of companies have been increased by 5% of the total income, in each case, over the corresponding rates in force for the assessment year 1965-66 except in the case of domestic companies in which the public are substantially interested with total income not exceeding Rs. 25,000. In the case of the last-mentioned class of companies, the rate of income-tax has been increased from 42.5% to 45%. The round about procedure of calculation of tax on companies has been avoided under the rate schedule of tax provided in the Bill by eliminating the provisions for rebates and reductions of such rebates, and stating, directly, the effective rates of tax applicable to income of each class of company.

Expenditure tax has been abolished. The loss in revenue is Rs. 60 lakhs. Gift tax rates revised. Exemption limit raised from Rs. 5,000 to Rs. 10,000.

Estate duty rates on certain intermediate slabs raised.

The loss in revenue due to changes in Gift tax is Rs. 1.71 crores. The additional revenue from Estate duty (going to States) is expected to be Rs. 70 lakhs.

2. Companies—General rates of tax on corporate incomes raised by about 10%—50 to 55% for public companies, 60 to 65% for closely held companies. The net gain to revenue after reduction of Rs. 5.6 crores under surtax, will be Rs. 43.46 crores.

Income-tax discontinued on national capital gains accruing to equity shareholder when allotted bonus shares; liability for taxation to arise when capital gain is actually realized. The loss of revenue is Rs. 7 lakhs.

Existing tax of 12.5% on bonus issues discontinued.

Central Sales Tax on inter-State sales has been raised from two to three per cent. The yield will give Rs. 19 crores to States annually and Rs. 9.5 crores in 1966-67.

Collections in Union Territories, part of the Consolidated Fund of India, will increase by Rupees one crore in a full year and Rs. 50 lakhs in 1966-67.

Ceiling on Sales Tax on goods of special importance in inter-State trade has been raised from two to three per cent. The Additional revenue is Rs. 7.5 crores in the next financial year and Rs. 15 crores in one full year.

Tax of 7.5% on equity dividends in excess of 10% of paid-up capital, instead of on total dividends as at present.

Rates of surtax reduced from 40 to 35%.

Rate of tax on profits from life insurance business raised from 47.5 to 52.5%.

Tax on foreign companies on income other than royalties and technical service fees payable under approved agreements raised from 65 to 70%.

Concessional tax rate of 25% for Indian companies on dividends, commissions, royalties and fees received from abroad.

Defence Budget—The small increase of about Rs. 29 cores in the Defence Budget for the coming year is due largely to increased pay and allowances of the officers and men of the three forces.

The bulk of the increase is accounted for by the Army. In fact, the expenditure on the Army has risen by Rs. 30 crores, and on the Navy by Rs. 2 crores.

On the other hand, the expenditure on the Air Force has declined by about Rs. 4 crores largely because of an anticipated decline in the outlay on stores.

The overall Defence expenditure in the year 1966-67 will be a little over Rs. 918 crores compared to over Rs. 888 crores, which is the revised estimate for the year ending on March 31, 1966.

Some other features of the Defence Budget are a loan of Rs. 1.5 crores to Bharat Electronics; additional share capital of Rs. 1 crore for Mazagon Docks; and additional Rs. 1 crore for investment in Bharat Earth Movers.

Development Programmes—Next year's Budget estimates show over 50% increase in capital expenditure on the development of atomic energy in the country and certain other significant trends in scientific research and development.

On the other hand, allocation for two major river valley projects of vital importance to the eastern States—the Damodar Valley Corporation

and Farakka Barrage Project are being substantially reduced as a measure of economy. There is no mention of the Haldia subsidiary port in the capital Budget.

Against Rs. 33.47 crores in the revised estimates for 1965-66 for atomic energy, the provision in the next year's capital Budget is Rs. 51.27 crores. Similarly, the allocation in the revenue estimates show an increase from Rs. 11.42 crores to Rs. 14 crores.

Some of the institutions to benefit from this increased allocation are: the Tata Institute of Fundamental Research, Indian Cancer Research Centre, and the Tata Memorial Hospital in Bombay; the Saha Institute of Nuclear Physics in Calcutta; and the Physical Research Laboratory of Ahmedabad.

For the first time attention is being given to the development of India's own electronics industry, and a provision of Rs. 20 lakhs has been made in the capital Budget.

Other interesting capital Budget allocations are: Rs. 84 lakhs for a foundry forge project, Rs. 25 lakhs for an agricultural, tractor and components project, Rs. 50 lakhs for a blast furnace project and Rs. 19 lakhs for a second shipyard.

Against Rs. 3.9 crores in the current year's revised Budget, the Damodar Valley Corporation will get Rs. 2.48 crores in 1966-67 and the Farakka Barrage Project Rs. 12.50 crores against Rs. 14.24 crores.

UNION BUDGET

(In Crores of Rupees)

Revenue Budget

	<i>Budget</i> 1965-66	<i>Revised</i> 1965-66	1966-67
Receipts ..	2345.87	2469.1	2617.12
Disbursements	2116.48	2187.42	+ 101.51(*)
Surplus ..	(+) 229.39(*)	(+) 282.09	2407.41
			(+) 209.71
			(+) 101.51(*)

Capital Budget

Receipts ..	2166.24	2162.86	2160.50
Disbursements	2083.30	2247.86	(+) 92.12(*)
			1952.50

(*) Effect of budget proposals.

INCOME-TAX

The following is the table of tax (including surcharges) payable by a married individual with more than one child (resident tax-payer) :—

<i>Income before deduction of annuity deposit (in Rs.)</i>	<i>Annuity deposit (in Rs.) 1965-66 and 1966-67</i>	<i>Total income after deduction of annuity deposit (in Rs.) 1965-66 and 1966-67</i>	<i>Amount of Tax</i>	
			<i>Wholly earned income, 1966-67</i>	<i>Wholly unearned income, 1966-67</i>
4,500	—	4,500	—	—
5,000	—	5,000	11	11
6,000	—	6,000	121	121
7,400	—	7,400	275	275
10,000	—	10,000	561	561
12,500	—	12,500	974	974
15,000	—	15,000	1,386	1,386
18,000	900	17,100	1,848	1,940
20,000	1,000	19,000	2,266	2,442
24,000	1,800	22,200	3,212	3,577
25,000	1,880	23,120	3,516	3,942
36,000	2,700	33,300	8,151	9,504
40,000	3,000	37,000	10,186	11,946
48,000	4,800	43,200	13,596	16,038
60,000	6,000	54,000	19,976	23,826
70,000	7,000	63,000	25,916	31,251
72,000	8,000	64,000	26,576	32,076
1,00,000	12,500	87,500	43,049	52,667
2,00,000	25,000	1,75,000	1,08,292	1,30,870

RAILWAY BUDGET

A surcharge of three per cent on goods freight is proposed in the Railway Budget for 1966-67. Exports of iron and manganese commodities charged even now at the highest rates will be exempted.

There will be no increase in passenger fares. A slight reduction has been proposed in season ticket charges for journeys beyond twenty kilometres in all the regions other than Madras, Bombay and Calcutta.

The Budget proposed with regard to coal, coke and salt, relatively small increases in the tariffs for movements beyond 800 kilometres.

The maximum tariff increase at the longest distance will be limited in the case of coal to Rs. 4 per ton which level of increase will be reached only for distances beyond 1,860 kilometres. The maximum increase for salt at any distance on account of the revision in the tariff rate will be Rs. 3.50 per ton.

Almost half of the total salt movement and about 58 p.c. of the coal movement by rail are for distances of 800 kilometres or less and will not be affected by the revision.

The Budget estimated the gross traffic receipts in 1966-67 to be Rs. 795.33 crores.

After ordinary revenue working expenses, the appropriation of depreciation reserve fund from revenue and other appropriations will total Rs. 639.65 crores, leaving a net surplus of Rs. 155.68 crores.

Some further changes proposed which will also bring rates closer to cost are expected on the balance to cancel out giving no additional revenue.

These include a reduction in freight rates for a number of commodities in common use like sugar, tea, biscuits, medicines and hydrogenated oils.

The provision for new line constructions in the Railway budget is Rs. 50.69 crores, excluding a credit of Rs. 7 lakhs for recoveries from the Visakhapatnam port authorities of their share of the cost of the project known as "ore yard and sick lines at Waltair". This includes a provision for 1966-68 of Rs. 218.56 lakhs for the construction of Bangalore-Salem railway (Southern Railway), Rs. 5.52 lakhs for electrification of Madras (Egmore)-Tambaram-Villupuram metre gauge section, and provision of 25 KV/AC traction overhead equipment on the third track between Madras (Egmore) and Tambaram. A sum of Rs. 4 lakhs has been provided for the construction of a new line between Virudhunagar and Manamadurai and a sum of Rs. 51.48 lakhs has been provided for a project Madras (Beach)-Tambaram suburban section conversion from 1500 V/DC to 25 KV/AC traction.

On the expenditure side, a substantial curtailment in the programmes of new works and the rephasing of works in progress would be unavoidable because of the limited availability of resources and the Government policy to review capital investment programmes. The allotment by the Railways for expenditure of a capital nature would be kept down to Rs. 225 crores against Rs. 314.24 crores in 1964-65.

The revised estimate for capital expenditure on works and rolling stock was placed at Rs. 354.8 crores, against the budget estimate of Rs. 345 crores. The increase had been due to post-budget factors, such as additional taxes, increase in prices of steel etc., and would have been even greater but for the exercise of strict economy and a marginal slowing down of schemes.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The freight traffic in the railways was expected to exceed the target of an additional 100 lakh tonnes.

The goods earning for the current year was expected to be Rs. 462 crores against the budgeted Rs. 441.90 crores. In passenger earnings, however, a shortfall of Rs. 1 crore was likely because of the "set-back during August-September" and also perhaps because of the poor agricultural season. Passenger receipts have been placed at Rs. 227.20 crores as compared with Rs. 220.50 crores expected for the current year.

The gross traffic receipts were estimated at Rs. 741.80 crores—Rs. 25.80 crores or about 2.6 per cent more than the budget.

After meeting the working expenses and various appropriations (Rs. 639.65 crores), payment to general revenue (Rs. 133.49 crores) the net surplus for the current year was expected to be about Rs. 29.19 crores against the budgeted figure of Rs. 29.24 crores.

The general surcharge of three per cent and the other charges are together expected to yield an additional revenue of about Rs. 18.10 crores.

RAILWAY BUDGET AT A GLANCE

(Rupees in Crores)

	<i>Actuals</i> (1964-65)	<i>Budget</i> (1965-66)	<i>Revised</i> <i>Estimate</i> (1965-66)	<i>Budget</i> (1966-67)
Ordinary Revenue Working Expenses Net, i.e., after taking credits or recoveries ..	433.45	457.84	482.04	508.68
Appropriation to Depreciation, Reserve Fund from Revenue	83.00	85.00	85.00	100.00
Appropriation to Pension Fund	11.50	12.00	12.00	13.50
Net Miscellaneous Expenditure (including cost of works charged to Revenue) ..	14.79	16.02	16.52	17.47
TOTAL ..	542.74	570.86	595.56	639.65
Gross Traffic Receipts ..	660.85	716.00	741.80	795.33
Payment to General Revenues :				
(i) Dividend ..	92.43	103.40	103.75	133.49
(ii) In lieu of Passenger Fare Tax for transfer to States	12.50	12.50	12.50	—
Net Surplus ..	<u>13.18</u>	<u>29.24</u>	<u>29.99</u>	<u>22.19</u>
Net Railway Revenue ..	<u>118.11</u>	<u>145.14</u>	<u>146.24</u>	<u>155.68</u>

WEIGHTS AND MEASURES

METRIC SYSTEM

10 Millimetres	=	1 Centimetre	=	0.39370113 inch
10 Centimetres	=	1 Decimetre	=	3.9370113 "
10 Decimetres	=	1 Metre	=	1.0936143 yds.
10 Metres	=	1 Dekametre	=	10.936143 "
10 Dekametres	=	1 Hectometre	=	1093.6143 "
10 Hectometres	=	1 Kilometre	=	0.62137 mile
1 Kilometre		=	0.6264 mile	

STANDARDS OF WEIGHT

1 grain	=	0.000054799 kilograms
1 ounce (oz.)	=	0.0283495 "
1 pound (16 ozs.)	=	0.4535924 "
1 hundredweight (cwt.)	=	50.802 "
1 ton (2240 lbs.)	=	1016.05 "
1 tola	=	0.0116638 "
1 seer (80 tolas)	=	0.93310 "
1 maund (40 seers)	=	37.3242 "

LAND MEASURE

		1 acres	=	0.0988 rood
1000 sq. metres	=	1 hectare	=	2.4711 acres
1000 hectares	=	1 sq. kilometre	=	0.8411 sq. mile
		1 sq. metre	=	1.1960 sq. yards

STANDARDS OF LENGHT & CAPACITY

1 inch	=	0.0254 metre (exact)	=	2,539999 cms.
1 foot	=	0.3048	"	
1 yard	=	0.914399	"	
1 mile	=	1609.344	"	
1 imperial gallon	=	4.54596 litres	=	61.02 cu. in.
1 litre	=	0.220 gallon		

HINDUSTAN YEAR-BOOK

Part II

THIS PART CONTAINS—

- (1) States and Territories.**
- (2) States with Special Relations.**
- (3) States bordering India.**
- (4) Indian Directory.**
- (5) State Ministries.**
- (6) Members of Rajya Sabha and Lok Sabha.**
- (7) Foreign Affairs.**
- (8) Indian Politics.**
- (9) India in World Politics.**
- (10) Indo-Pakistani Relations.**
- (11) International Affairs.**
- (12) United Nations in 1965.**
- (13) Who's Who.**
- (14) Addenda.**

STATES & TERRITORIES

ANDHRA PRADESH

<i>Capital</i>	..	Hyderabad	<i>Cities :</i>	<i>Population</i>
<i>Area (sq. m.)</i>	..	106,286	Hyderabad	.. 1,251,119
<i>Population</i>	..	35,983,447	Vijayawada	.. 230,357
<i>Density (per sq. m.)</i>	..	339	Guntur	.. 187,122
<i>Females per 1,000 males</i>	..	981	Visakhapatnam	.. 182,004
<i>Literacy per 1,000</i>	..	212	Warangal	.. 156,106
<i>Principal Language</i>	..	Telugu	Rajahmundry	.. 122,865
<i>Universities</i>	..	Osmania (Hyderabad), Andhra (Waltair), Sri Venkateswara (Tirupati), A. P. Agricultural (Hyderabad).	Eluru	.. 108,321
			Nellore	.. 106,776
			Bandar	.. 104,417
			Kurnool	.. 100,815

Boundaries—Andhra Pradesh covers about one-fourth of the Deccan plateau and is bounded on the north by Madhya Pradesh and Orissa, on the west by Maharashtra and Mysore, on the south by Madras, and on the east by the Bay of Bengal.

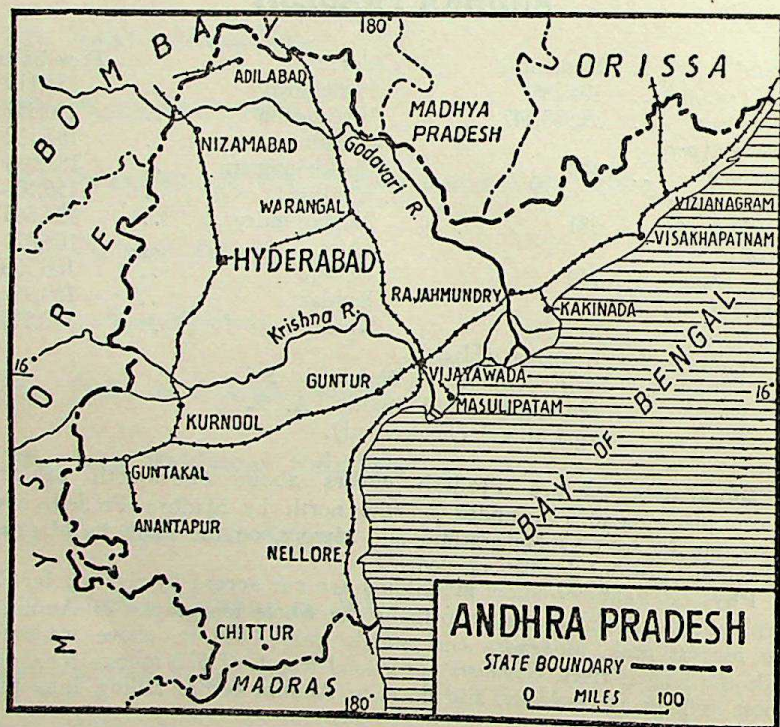
Physical Features—Low mountains are cut across by rivers ; fertile river valleys and flat coastal strip make the whole topography of Andhra. The highest peak, *Mahendra Giri* stands only 4,920 ft. above sea-level, while the longest river, *Godavari* has a total length of 870 miles. *Krishna*, almost as long as *Godavari*, also flows in Andhra before falling into the Bay of Bengal.

Climate & Rainfall—The climate of the State is generally hot and humid. The mountainous northern areas receive an annual rainfall of 20 in. In the southern regions, the annual rainfall is only 20 in. The State is principally fed by the south-west monsoon.

Population and Area—The population in round figure was 36 million in 1961. It accounts for 8.20 p.c. of the total population and occupies 9.03 p.c. of the total area of the country.

River Resources—The State is drained by the rivers *Godavari*, *Krishna* and *Pennar* and their tributaries, whose waters have been harnessed for irrigation to some extent. The Godavari flows for 225 miles through the State before it falls into the Bay of Bengal. Two-thirds of the land depends on rain, which is both inadequate and undependable.

Agriculture—Andhra Pradesh, fifth largest State in India, occupies a central position in the country's economy and may be described as among the most lavishly endowed regions in natural resources—water, agriculture and mineral. Recognised as a major food-producing region,



contributing over 10 p.c. of the whole of the country's production of cereals, it also accounts for 20 per cent of the oilseeds and 40 per cent of the tobacco grown in India. It almost holds a monopoly in the production of castor and virginia tobacco, and contributes about 6.5 per cent of India's total sugar production.

Forests—Forests in Andhra occupy 19 p.c. of the total area,

which is higher than the total area of other States in India. Forests, which cover the inaccessible parts of the Eastern Ghats, contain useful species of timber. There are huge forest areas in Srikakulam, Visakhapatnam, Godavari, and Kurnool districts.

Cottage Industries—Andhra Pradesh is well-known for its handicrafts. The silver filigree articles of Karimnagar, the exquisite toys of Nirmal, Kondapalli and Tirupati, bidriware and himru of Hyderabad, the carpets of Warangal and Eluru, the attractive crochet lace goods of Narsapur and the excellent handloom textiles are the foremost. Handicrafts of Andhra Pradesh have earned world-wide reputation.

Industries—The most important of the industries in Andhra Pradesh are tobacco, rice milling, transport, cotton textiles, ship-building, edible oils, metals and non-metallic products, machinery, cotton ginning, sugar and carpets of Warangal and Eluru, the attractive crochet lace goods of jute. The main concentrations of industry are in Guntur-Krishna, Hyderabad, East Godavari and Visakhapatnam districts. The delta areas of the Krishna and the Godavari contain lignite deposits, while uranium is found in the Nellore district. Iron and manganese are strewn over various regions, while the Nellore district abounds in mica mines. Royalaseema and Telengana are well-known for mineral wealth including gold and diamond. The State produces large quantities of tobacco, sugarcane, groundnut, castor-seed, cotton, jute, hides and skins—all of which are useful for industrial processing and utilisation. It holds all-India record in the production of tobacco crop and is the leading earner of foreign exchange.

The Central Government's large-scale industries are *Hindustan Shipyard* and *Praga Tools Corporation*. The Centre have also established *Synthetic Drug Project* at Hyderabad, and is also locating *Heavy Electrical Plant*. Apart from above, two large-scale fertiliser industries are being established at Kothagudem and at Visakhapatnam.

There are two paper mills in the State, one at Sirpur and the other, a State-owned factory, at Rajahmundry, both in Adilabad district. The Government have launched three corporations, namely, Andhra Pradesh Industrial Development Corporation for large and medium industries, Andhra Pradesh Small-Scale Industrial Development Corporation and Andhra Pradesh Mineral Development Corporation. The industrial units run by the Government departmentally at present are *Andhra Paper Mills* at Rajahmundry, *Guntur Ceramic & Glass Factory*, *Government Power Alcohol Factory* at Bodhan. There are some industries in which the Government hold shares of the capital, such as *Nizam Sugar Factory*, *Singarani Collieries Company*, *Praga Tools Corporation*, *Azam Jaha Mills*, *Allwyn Metal Works*, *Hyderabad Chemicals and Fertilizers*, *Sirpur Paper Mills*, *Sirsilk Ltd.*

Minerals—The iron deposits in the State are estimated at about 400 million tons, of which approximately 15-20 million tons are presently

known to be of high grade. As the largest producer of barytes, it accounts for almost 95 p.c. of the country's output. The country's largest known deposits of chrysotile asbestos of the iron fibre type are located in the Cuddapah district of the State. Mica is mined on a considerable scale for export in the Nellore district, while manganese reserves in Visakhapatnam and Srikakulam districts of about 3 to 4 million tons are utilized for both export and the manufacture of ferro-manganese within the State. Recently copper deposits have been discovered.

Irrigation & Power—The State's most ambitious irrigation work is Rs. 140-crore *Nagarjunasagar Project*. The scheme comprises the construction of the world's tallest masonry dam on the Krishna river near Nandikonduru village, about 100 miles from Hyderabad and two canals on each side of the dam. *Tungabhadra Project* is the joint undertaking of the Governments of Andhra Pradesh and Mysore. It comprises a 7,942-foot long and 162-foot high dam on the Tungabhadra river and a system of canals with power stations on either side. The dam was inaugurated in July, 1953. *Machkund Project* is a joint venture of the Governments of Andhra Pradesh and Orissa and it has since been commissioned into service. The *Srisailem Hydro-electric Project* under the Third Plan envisages the construction of the biggest power project on the Krishna river in Kurnool district.

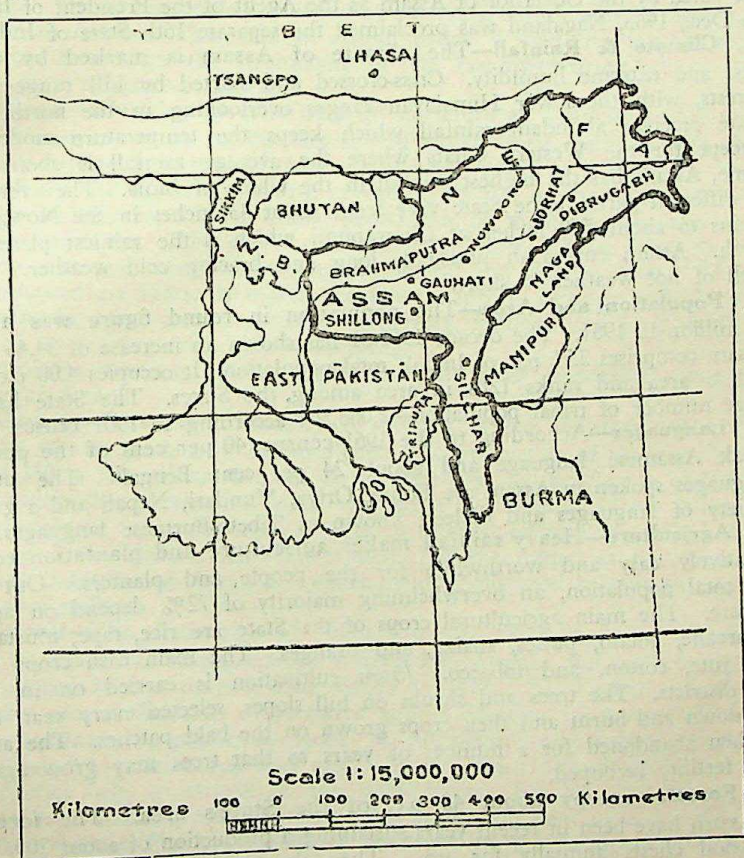
Ports—Andhra Pradesh has a coast-line of 600 miles with one major port, *Visakhapatnam* and three minor ports. The coast-line has central situation and accessibility to important industrial areas and ports like Bombay, Calcutta, and Madras.

Districts of Andhra Pradesh—Adilabad, Anantapur, Chittoor, Cuddapah, East Godavari, Guntur, Hyderabad, Karimnagar, Khammam, Krishna, Kurnool, Mahabubnagar, Medak, Nalgonda, Nellore, Nizamabad, Srikakulam, Visakhapatnam, Warangal, West Godavari.

ASSAM

<i>Capital</i>	..	Shillong	<i>University</i>	..	Gauhati
<i>Area (sq. m.)</i>	..	47,091			
<i>Population</i>	..	11,872,772	<i>Cities :</i>		<i>Population</i>
<i>Density (per sq. m.)</i>	..	252	Shillong	..	102,398
<i>Females per 1,000 males</i>	..	876	Gauhati	..	100,707
<i>Literacy per 1,000</i>	..	274	Dibrugarh	..	58,480
<i>Principal Languages</i>	Assamese & Bengali		Silchar	..	41,062
			Nowgong	..	38,600
			Digboi	..	35,028

Boundaries—This north-eastern State is almost bottled up between Bhutan and Tibet on the north, Burma on the east, and East Pakistan on the west, areas of Manipur on the east and of Cooch-Bihar and Tripura on the west thrown in, except for a narrow passage bordering along and through Cooch-Bihar. The hills that skirt the State are the Garo, the



United Khasi-Jaintia, the Mikir, the North Cachar, the Lushai (now officially known as Mizo) and the Naga Hills. The 25 Khasi Hill States were merged with Assam on 26th January, 1950, to be known as Khasi-Jaintia Hill district and have added 6,027 sq. miles of area. Assam occupies a strategically important position after the partition of India. Assam is no longer

a mere part of India, but it has become the main frontier, the veritable sentinel of India. There are two strategic frontier regions in Assam, both of which, though under the Governor of Assam, are excluded from the administrative control of the Assam Government. The one is *North-East Frontier Agency (NEFA)* and the other is *Nagaland*. These two regions are ruled by the Governor of Assam as the Agent of the President of India. In Dec., 1963, Nagaland was proclaimed the separate 16th State of India.

Climate & Rainfall—The climate of Assam is marked by coolness and extreme humidity. Criss-crossed and skirted by hill ranges and forests, with the lower Himalayan ranges overlooking in the north, the State receives abundant rainfall which keeps the temperature moderate. Except for the Western Ghats where the average rainfall is about the same, Assam has the highest rainfall in the whole of India. The averages in different parts of the State vary from about 43 inches in the Nowgong plains to about 500 inches at Cherrapunji which is the rainiest place on earth. Assam enjoys an unusually long and bracing cold weather. The spell of hot weather is short.

Population and Area—The population in round figure was about 12 million in 1961. The decade 1951-61 has shown an increase of 34.46 p.c. Assam comprises 2.71 p.c. of India's total population. It occupies 4.00 p.c. of India's area and ranks 12th in area among the States. The State has a large number of tribal population—2,068,364 according to 1961 census.

Languages—According to the 1961 census, 40 per cent of the people speak Assamese language and about 24 per cent Bengali. The other languages spoken in Assam are Hindi, Oriya, Mundari, Nepali and a great variety of languages and dialects known as Tibeto-Burmese languages.

Agriculture—Heavy rainfall makes agriculture and plantation comparatively easy and worthwhile for the people and planters. Out of the total population, an overwhelming majority of 72% depend on agriculture. The main agricultural crops of the State are rice, rape, mustard, sugarcane, potato, pulses, maize, and oranges. The main cash crops are tea, jute, cotton, and tobacco. *Jhum* cultivation is carried on in the hill districts. The trees and shrubs on hill slopes, selected every year, are cut down and burnt and then crops grown on the bald patches. The area is then abandoned for a number of years so that trees may grow again and fertility recouped.

Forests—occupy about 40 p.c. of the State's area. The forests of Assam have been in recent years sustaining a production of about 200,000 plywood chests annually for tea. They also produce very large quantities of bamboo for paper production. Assam is the biggest producer of cane in India. There are about 70 or more varieties of timber, of which 10 or 12 varieties are now generally used.

Fauna—Assam is fortunate in possessing probably the richest fauna of any part of Asia and outside Africa. The most important

animal from the point of view of its rarity and interest is the great Indian single-horned rhinoceros. Assam's rhino has the distinction of being the largest rhino in existence to-day. Other animals, such as elephant, wild buffalo, bison, swamp deer, rare birds like hornbill, king cobra and other kinds of reptiles also abound. Royal Bengal tigers and leopards are there too. The largest single population of elephants, outside possibly Burma, is found in Assam. There are in Assam to-day 4 wild life sanctuaries, of which Kaziranga—the stronghold of the fast-disappearing rhino—is famous as a tourists' attraction.

Cottage Industries—Second only to agriculture, weaving and sericulture industries are by far the largest and oldest single main, as well as subsidiary cottage industries in Assam. Though Assam is famous for its non-mulberry silk of *eri* and *muga*, producing 65 p.c. of the entire quantity of non-mulberry silks in India, production of mulberry silk also is gradually increasing. The golden-coloured muga yarn, besides being used for fabric, is also used for embroidery work and fishing lines. The cream-coloured *eri* fabric is mainly used as wrappers, suitings and shirtings. Among other cottage industries are ivory, bamboo and cane work, bell-metal work, carpentry, and bee-keeping.

Handloom weaving is the largest and the most important cottage industry of Assam.

Industries—The main industry of Assam is tea industry. There are nearly 965 tea gardens in Assam alone. The production of tea is of the order of 350 to 360 million lbs., out of the country's total production of 600 to 650 million lbs. Assam has made vast stride in jute cultivation. It has the distinction of being the leading State in mineral oil industry. Coal is worked in Ledo, Nazeria and Cherrapunji, but the output is not high. The other industries of Assam are match-making, plywood manufacturing, rice and oil-milling.

Minerals—The distinction of being the only place in India where mineral oil has so far been produced, belonged to Assam. But oil is being now produced in one or two other States in India. To Digboi is now added the new oil-fields at *Naharkatiya* and at *Hurijan* in Assam. The State is fortunate in possessing scope of petroleum and petro-chemical industry based on mineral oil and gas. Utilising the crude oil at Naharkatiya, Moran belt, a refinery in the public sector has been set up at *Noonmati*, near Gauhati, which has gone into production since January, 1962.

Hydro-electric Power—Assam is deficient in power development, but the first big power development known as *Umtru Hydro-Electric Project*, came into operation in 1957 under Colombo Plan, with the monetary assistance of Canada, and is expected to produce 7,500 kilowatt for the purpose of supplying electrical power to the city of Gauhati. The Umtru Power House is at a distance of about 19 miles south of Gauhati on the southern slopes of the United Khasi and Jaintia Hills.

Districts of Assam (*with headquarters within brackets*)—Goalpara (Dhubri), Kamrup (Gauhati), Darrang (Tezpur), Nowgong (Nowgong), Sibsagar (Jorhat), Lakhimpur (Dibrugarh), Cachar (Silchar), Garo Hills (Tura), United Khasi & Jaintia Hills (Shillong), United Mikir & North Cachar Hills (Diphu) and Mizo Hills (Aijal).

BIHAR

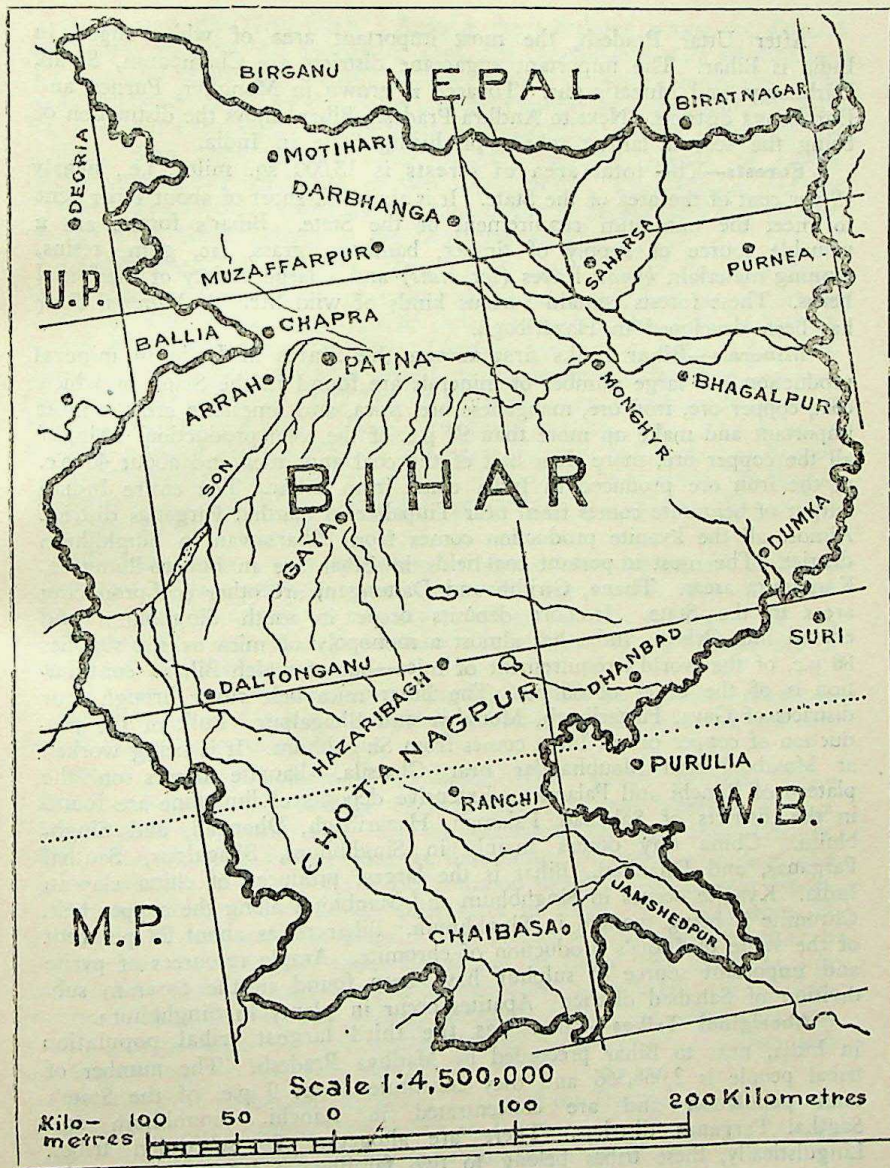
<i>Capital</i>	.. Patna	<i>Cities :</i>	<i>Population</i>
<i>Area (sq. m.)</i>	.. 67,196	Patna ..	.. 3,64,594
<i>Population</i>	.. 46,455,610	Jamshedpur ..	.. 3,28,044
<i>Density (per sq. m.)</i>	691	Dhanbad ..	.. 2,00,618
<i>Females per 1000 males</i>	.. 994	Gaya ..	.. 1,51,105
<i>Literacy per 1000</i>	184	Monghyr ..	.. 1,46,807
<i>Principal Language</i>	Hindi	Bhagalpur ..	.. 1,43,850
<i>Universities</i>	.. Patna, Bihar	Ranchi ..	.. 1,40,253
(Muzaffarpur), Bhagalpur, Ranchi,		Muzaffarpur ..	.. 1,09,048
Kameshwar Singh Sanskrit (Darbhanga), Magadh (Bodh-Gaya).		Darbhanga ..	.. 1,03,016
		Chapra ..	.. 88,264
		Bihar ..	.. 78,581

Boundaries—Bihar is bounded on the north by the territory of Nepal and the Darjeeling district of West Bengal, on the east by West Bengal, on the south by Orissa, and on the west by U. P. and M. P.

Climate & Rainfall—Climatically, Bihar is a beautiful 'belt of transition' between the wet and humid regions of deltaic Bengal and the arid dryness of the greater part of U.P. and M.P. Rainfall is heavier on the plateaus than on the low-lying Ganga valley but the plains are the real beneficiaries as well as sufferers from draughts and floods. Swelled by the monsoons and melting snows the rivers *Kosi*, *Gandak* and *Sone* retard the development work by their annual havoc which runs into some crores.

Population and Area—With the population in round figure of 47 million in 1961, Bihar stands second only to U.P. in matter of population though in area it stands eighth. The decennial increase of population is 19.76 per cent. The highest growth was recorded in Purnea. Educationally, Bihar has emerged as a backward State with only 18.4 p.c. of its people being literate. Exactly 6,536,875 persons were enumerated as belonging to the Scheduled Castes and 4,204,770 to the Scheduled Tribes.

Agriculture—Bihar is essentially an agricultural State. About 82 per cent of its population depend on agriculture. Fertile river-beds produce almost all the crops. Rice, tobacco and sugarcane occupy a prominent place in agricultural economy. Other crops are paddy, maize, wheat, barley, *rahar*, jute, chilly, potato, oilseed, pea, *khesari* etc.



After Uttar Pradesh, the most important area of white sugar in India is Bihar. The important sugarcane districts are Champaran, Saran, Darbhanga and Muzaffarpur. Tobacco is grown in Monghyr, Purnea and Darbhanga districts. Next to Andhra Pradesh, Bihar enjoys the distinction of being the second largest tobacco-producing State in India.

Forests—The total area of forests is 13,000 sq. miles, i.e., nearly 19 per cent of the area of the State. It is thus still short of about 1 per cent to meet the minimum requirement of the State. Bihar's forests are a valuable source of supply of timber, bamboos, grass, lac, gum, resins, tanning materials, *kendu* leaves (for *bidis*) and a large variety of medicinal herbs. These forests contain various kinds of wild life. A *National Park* has been developed in Hazaribagh.

Minerals—Bihar ranks first among the States in India in mineral production. A large number of minerals are found in the State, of which coal, copper ore, iron ore, manganese ore, mica, and limestone are the most important and make up more than 98 p.c. of the total production. Almost all the copper ore, more than half of the coal and mica and about 40 p.c. of the iron ore produced in India come from Bihar. The entire Indian output of bentonite comes from near Tinpahar in Santhal Parganas district. Almost all the kyanite production comes from Kharsawan in Singhbhum district. The most important coal-fields in Bihar are in Bokaro-Ramgarh-Karanpura areas. Thana, Giridih and Daltonganj are other coal-producing areas in the State. Iron-ore deposits occur in south Singhbhum and extend into Orissa. India has almost a monopoly of mica as she supplies 80 p.c. of the world's requirement of mica—out of which Bihar's contribution is of the order of 66 p.c. The Bihar mica belt runs through four districts of Gaya, Hazaribagh, Monghyr and Bhagalpur. Bulk of the production of copper ore in India comes from Singhbhum. It is being worked at Mosaboni and Maubhandar near Ghatsila. Bauxite occurs on the plateau of Ranchi and Palamau. Extensive deposits of limestone are found in the districts of Sahabad, Palamau, Hazaribagh, Dhanbad, and Singhbhum. China clay occurs mainly in Singhbhum, Bhagalpur, Santhal Parganas, and Dhanbad. Bihar is the largest producer of china clay in India. Kyanite occurs in Singhbhum and Manbhum along the copper belt. Chromite is being worked in Singhbhum. Bihar raises about 24 per cent of the value of India's production of chromite. Ample resources of pyrite and important source of sulphur have been found in the Sasaram subdivision of Sahabad district. Apatites occur in plenty in Singhbhum.

Aboriginal Tribes—Bihar has the third largest tribal population in India, next to Bihar preceded by Madhya Pradesh. The number of tribal people is 2,068,366 and they constitute about 9 p.c. of the State's total population and are concentrated in Ranchi, Singhbhum and Santhal Parganas districts. There are altogether 29 scheduled tribes. Linguistically, these tribes belong to two families of language, *viz.*, the

'Austrie' and the 'Dravidian.' Among the scheduled tribes, the Oraons, the Sauria and the Mal Pahariyas speak the Dravidian family of language and the rest speak the Austrie or the Munda group of language. The most important tribes in this State are the Oraons, Mundas, Santhals, Hos, Kharias, and Pahariyas. The important minor tribes are the Asurs, Birhor, Binjhia, Birja, and Korwa. The majority of the people of Chotanagpur are tribals consisting of two main groups, the Mundas and the Oraons. The former belong to the Austro-Asiatic family, and the Oraons, on the other hand, belong to the Dravidian family.

Industries—The gigantic *Tata Iron and Steel Co. (TISCO)* at Jamshedpur tops the list of industries. Coal, mica, and lac are major industries. One of the biggest public sector enterprises, the *SINDRI FERTILIZER FACTORY* is in this State. *Tinplate Company of India* at Jamshedpur is the only factory in Bihar manufacturing tinplate. The *Tata Engineering and Locomotive Co. (TELCO)* at Jamshedpur manufactures locomotives and engineering products. Other important ventures are: (1) a heavy machine-building plant at Hatia, (2) a heavy machine tool factory at Ranchi, (3) fourth steel plant at Bokaro, (4) an oil refinery at Barauni, (5) *Indian Aluminium Co.* at Muri (Ranchi) producing aluminium, (6) *Indian Explosive Factory* at Gomia.

Silk Industry is a very important cottage industry of Bihar. Mulberry silk-worms which produce varieties of silk, are reared. *Eri* silk-worm rearing is also an important industry in Bihar. Besides mulberry and eri, Bihar produces largest yardage of *tassar* silk in India, which is produced in the jungles of Chotanagpur.

The sugar industry occupies an important place in the rural economy of the State. About 4 lakh cane-growers and about 10 thousand workers find employment in this industry.

River Valley Projects—The major river valley projects are—(1) *Kosi Project*, (2) *Gandak Project*, and (3) *Sone Barrage Project*. The Kosi Project was taken up for execution on the 14th January, 1955. The Gandak Project aims at harnessing the large irrigation and power potential of the river for the common benefit of India and Nepal. It envisages irrigation of 25·428 lakh acres in Bihar, 8·31 lakh acres in U.P. and 1·44 lakh acres in Nepal. The Project also envisages generation of power to the extent of about 39,000 kw. in Bihar and 10,000 kw. in Nepal. The Sone Barrage Project is calculated to forestall the dangers to the existing 85 year old anicut, presently facing the Sone irrigation system, and envisages (1) the construction of a barrage on the river and (2) remodelling of the canal system.

Districts of Bihar—Bhagalpur, Champaran, Darbhanga, Dhanbad, Gaya, Hazaribagh, Monghyr, Muzaffarpur, Palamau, Patna, Purnea, Ranchi, Saharsa, Santhal Parganas, Saran, Sahabad, Singhbhum.

GUJARAT

		<i>Cities :</i>	<i>Population</i>
<i>Capital</i>	.. Ahmedabad		
<i>Area (sq. m.)</i>	.. 72,245		
<i>Population</i>	.. 20,633,350	Ahmedabad	.. 1,206,001
<i>Density (per sq. m.)</i>	286	Baroda	.. 2,98,398
<i>Females per 1000 males</i>	.. 940	Surat	.. 2,88,026
<i>Literacy per 1000</i>	305	Rajkot	.. 1,94,145
<i>Principal Language</i>	Gujarati	Bhavnagar	.. 1,76,473
<i>Universities</i>	.. Gujarati (Ahmedabad), Sardar Vallabhbhai Vidyapith (via Anand), Maharaja Sayaji Rao (Baroda).	Jamnagar	.. 1,48,572
		Nandiad	.. 78,952
		Porbandar	.. 75,081
		Broach	.. 73,639
		Junagadh	.. 74,298

Boundaries—The State of Gujarat lies on the west coast of India, bounded by the Arabian Sea on the west, Rajasthan on the north and east, Madhya Pradesh on the south-east and Maharashtra on the south.

Physical Features—From the point of view of its physical features Gujarat can be divided into three regions: the mainland extending from the Rann of Kutch and the Aravali Hills to the river Damanganga; the hilly peninsular region of Saurashtra and Kutch; and the north-eastern hilly tract. The mainland is almost a flat plain made up of alluvial soil although the northernmost part of it is a bit sandy. The plains of Gujarat are watered by big rivers like the Banas, Saraswati, Sabarmati, Mahi, Narmada, Tapti and some rivulets. A large part of the border-line of Gujarat is covered with hills which are the trails of the mountains lying outside the territories of Gujarat.

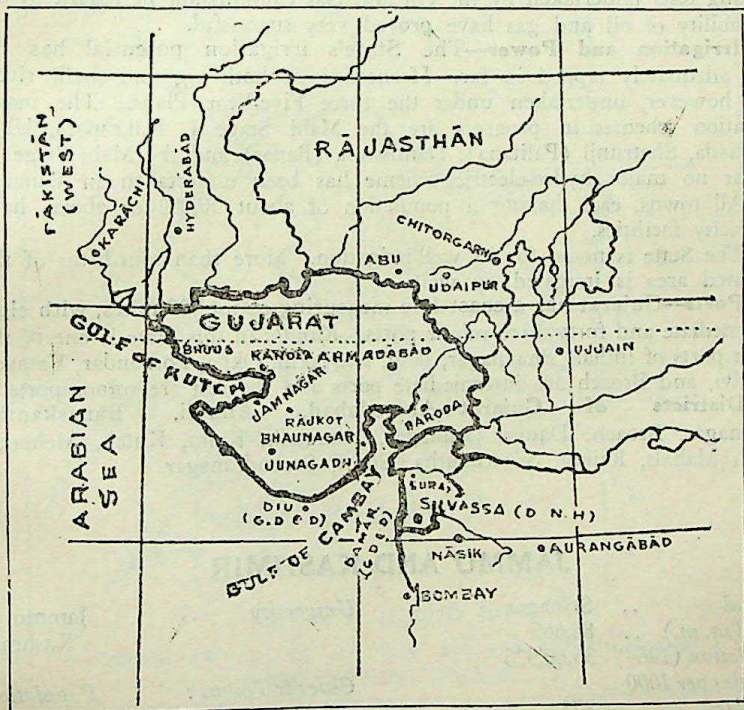
Climate—As the Tropic of Cancer passes through Gujarat's northern border, the State has an intensely hot or cold climate. But the Arabian Sea and the Gulf of Cambay washing its western coast reduce the temperature and render the climate more pleasant and healthy. The presence of the forest-covered rugged mountains and hills on the eastern boundary also helps in reducing the intensity of climate.

Population and Area—Gujarat has a population of 21 million in round figure. The decade 1951-61 has shown an increase of 26.88 per cent. Gujarat has 4.70 p.c. of India's population and 6.14 p.c. of India's total area.

Agriculture—About 60 p.c. of the people of Gujarat are engaged in agriculture, the principal crops being wheat, paddy, jowar, pulse, and tobacco. The important cash crop is cotton, and about one-fifth of the area under cotton in the country is in this State. The soil is varied—goradu, black, alluvial, sandy, etc. The percentage of area under barren and uncultivable land is very high. The State is, however, rich in permanent pastures and grazing lands which account for 2.65 per cent of the area.

The percentage of area under food crops is only 55.70. Among cereals, bajra and jowar occupy a sizeable portion of the cultivated area.

Flora and Fauna—There is no appreciable forest in Gujarat. They are, however, well distributed. On the west there is the Gir forests; in centre there are the Panchmahal forests; and in the south lie Surat and Dangs forests. The Gir forests are known as the remaining 'habitat' of the Asian lion. These forests are again repositories of valuable herbs. The total area under forests is only 38.26 lakh acres.



Gujarat is famous for its Gir, Kankrej and Kutch breeds of cow. Junagadh, Surat and Mehsana breeds of buffalo are equally famed.

Industries—Gujarat has many major as well as minor industries. The main industry is textiles, and many mills are located in and around the present capital Ahmedabad. Salt, cement, pharmaceuticals, dye-stuffs, and chemicals are other worth mentioning. The principal commercial crops of the State are oilseeds, cotton, sugarcane, tobacco, and maize. There are also other industries, such as ceramics and potteries, paints and varnishes,

oilseeds crushing, handloom, dairy, and cotton mills' machinery spare parts. The State produces salt to the extent of about 25 p.c. of the total production in India. The recent find of oil in Cambay and Ankleswar places the State in the industrial map of India.

Minerals—Amongst important minerals found in this State are: high-grade limestone, bauxite, gypsum, manganese, quartz, and other varieties of dyes. With a large and convenient coast-line, the State is favourably situated in respect of production of salt, coal and lignite. Drilling tests undertaken by the Oil and Gas Commission in regard to the availability of oil and gas have proved very successful.

Irrigation and Power—The State's irrigation potential has not been adequately tapped so far. Harnessing of both big and small rivers was, however, undertaken under the three Five-Year Plans. The major irrigation schemes in progress are the Mahi Stage I, Kakrapara, Ukai, Narmada, Shetrunji (Palitana), Dantiwada (Banas) and the Mahi Stage II. So far no major hydro-electric scheme has been undertaken in Gujarat.

All towns, each having a population of about 50,000 or above, have electricity facilities.

The State is noted for its well-irrigation. More than four-fifths of the irrigated area is irrigated by wells.

Ports—Gujarat has a coast-line measuring about 900 miles, with eight intermediate and forty-three minor ports. *Kandla* in this State is one of the major ports of India. Bhavnagar, Bedi, Navlakhi, Okha, Porbandar, Veraval, Mandvi, and Broach are intermediate ports and the rest are minor ports.

Districts of Gujarat—Ahmedabad, Amreli, Banaskantha, Bhavnagar, Broach, Dangs, Jamnagar, Junagadh, Kaira, Kutch, Mehsana, Panch Mahals, Rajkot, Sabarkantha, Surat, Surendranagar.

JAMMU AND KASHMIR

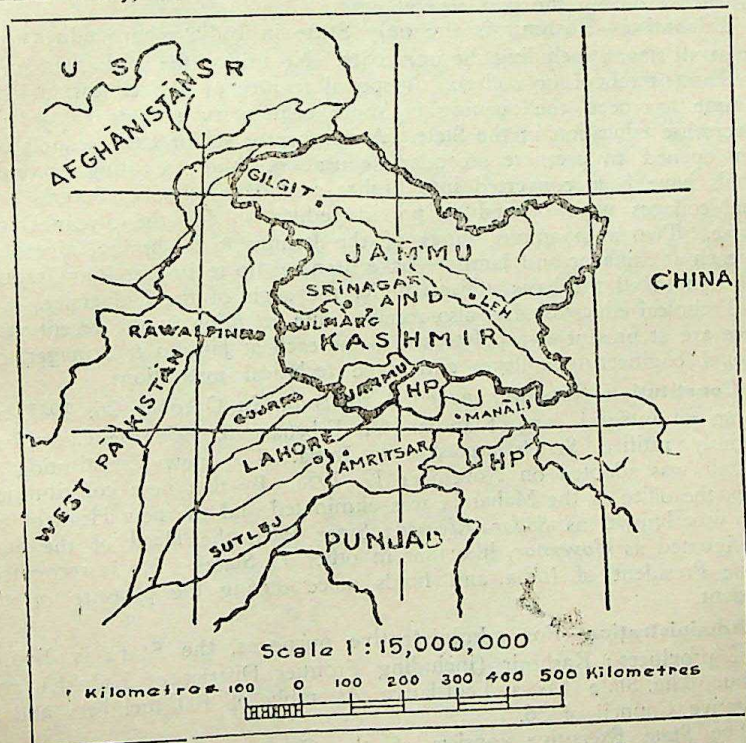
<i>Capital</i> ..	Srinagar	<i>University</i> ..	Jammu & Kashmir
<i>Area (sq. m.)</i> ..	86,665		
<i>Population (1964)</i>	35,60,976		
<i>Females per 1000 males</i> ..	873	<i>Cities & Towns :</i>	<i>Population</i>
<i>Literacy per 1000</i>	110	Srinagar ..	.. 2,95,084
<i>Principal</i>		Jammu ..	.. 1,02,738
<i>Languages</i> ..	Kashmiri, Urdu and Dogri	Anantnag ..	.. 21,087
		Baramula ..	.. 19,854

Boundaries—Jammu & Kashmir, the northernmost State of India, touches the boundaries of these countries—Afghanistan, U.S.S.R. and China in the north; Tibet lies to its east and Punjab to its south.

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Physical Features—The country is almost entirely mountainous, and it may be geographically divided into three areas: Tibetan and semi-Tibetan tracts in the north, containing the districts of Ladakh and Gilgit; the middle region of the happy valley of Kashmir, and the large level areas of Jammu in the south.

Rainfall—The average annual rainfall in the State varies from 30 to 60 inches, except in Ladakh district where it is 4 inches. In the Kashmir Valley, the annual rainfall varies from 30 to 35 inches.



Population and Area—The population in round figure was about 36 million in 1961. It has 0.81 p.c. of India's total population. About 16.7 p.c. of the total population is urban.

Transport—Jammu & Kashmir State has the distinction of being the only State in India, where the Government and private transport run side by side under a controlled competition.

The land route begins from Pathankot, the railway terminus of the Northern Railway. The distance from Pathankot to Srinagar *via* Jammu

is 267 miles. The first 65 miles upto Jammu are by a nicely metalled and tarred plain road and the rest lead through mountainous and picturesque scenery. The Indian Airlines is operating passenger service between Delhi and Srinagar. The opening of a low-level tunnel, now called the *Jawahar Tunnel*, on 22nd December, 1956 is an important event in the history of Kashmir. The physical barrier separating the valley from the rest of the country has been overcome and a permanent link between Kashmir and the rest of India forged. Many new bridges have also been constructed during the past several years.

Education—Kashmir is the only State in India where education is free at all stages, including the university. No tuition fee is charged in any Government school or college. A special feature of the educational programme has been the opening of more elementary schools in order to universalise education in the State. A number of senior basic schools have been opened to promote secondary education. Many existing secondary schools have been converted into higher secondary schools. Several additional colleges were opened to provide education for the 3-year Degree Course. Two autonomous wings of the Jammu & Kashmir University—one each at Srinagar and Jammu—have been set up to impart Post-Graduate education in all the basis subjects under the aegis of the University.

Technical education has also received due attention in the recent years. There are at present two polytechnics, one each at Jammu & Srinagar, one regional engineering college, and some technical institutions.

Constitution—Kashmir acceded to India in October 26, 1947 and became an integral part of India. On February 6, 1954 the Constituent Assembly ratified State's accession to India. The new Constitution of Kashmir was adopted on November 17, 1956. By that new constitutional set-up, the office of the Maharaja was eliminated and the new Head of the State was known as *Sadar-i-Riyasat*. Since 1964, the Head of the State is designated as *Governor*, like that in other 15 States. He is recognised by the President of India and holds office during the pleasure of the President.

Administration—For administrative purposes, the State is divided into 2 provinces: Kashmir (including Frontier District of Ladakh) and Jammu. The State has a Legislative Assembly of 100 members and a Legislative Council of 36.

The State Executive consists of the Governor and a Council of Ministers with a Chief Minister at its head.

Agriculture—The main occupation of the people of Jammu & Kashmir is agriculture. The total area under cultivation is 17.03 lakh acres. Chief crops grown are rice, wheat, maize, tobacco, oilseeds, saffron, barley and cotton. Fruits for export include walnuts, almonds, pears, and apples.

Forests—The State has considerable forest wealth. The total

area covered by forests in the State is 11,057.5 sq. miles. The soft wood forests of the State are the richest in the country. There are several important forest industries, such as resin and turpentine tapping. Kashmir has a virtual monopoly in willow wood used in the manufacture of cricket bats. Raising of fuel-wood and quick-growing plantations over more than 12,000 acres of land is one of the achievements under various plan schemes.

Fauna—Kashmir's forests are world-famous for fauna and wild games. Game birds like partridges and jungle fowls are found. But the best sport is afforded by *chakor*, specially in the valley.

Minerals—The mineral resources of the State as yet unexplored are vast indeed. Large deposits of good-quality coal, lignite, gypsum, and promising occurrences of lead, zinc, copper, bauxite, asbestos, nickel, iron ore, borax, fuller's earth, slate, kaolin as well as gold and sapphire have been reported. For the exploitation of known reserves, a public sector company, known as *J. & K. Minerals Ltd.*, has been floated.

Industries—Next to agriculture, cottage and small-scale industries play an important role in the economy of the State. Its silk filature industry is the biggest in the world. Some of the notable handicrafts of the State are : Kani shawls, *shahtosh*, carpets, papier machie, wood-carving, embroidered goods and silverware, pure silks, *numdas*, turquoise, jewellery, etc. As many as 20 *Industrial Estates* have been established in important towns to provide suitable accommodation, water and power supply to the prospective entrepreneurs.

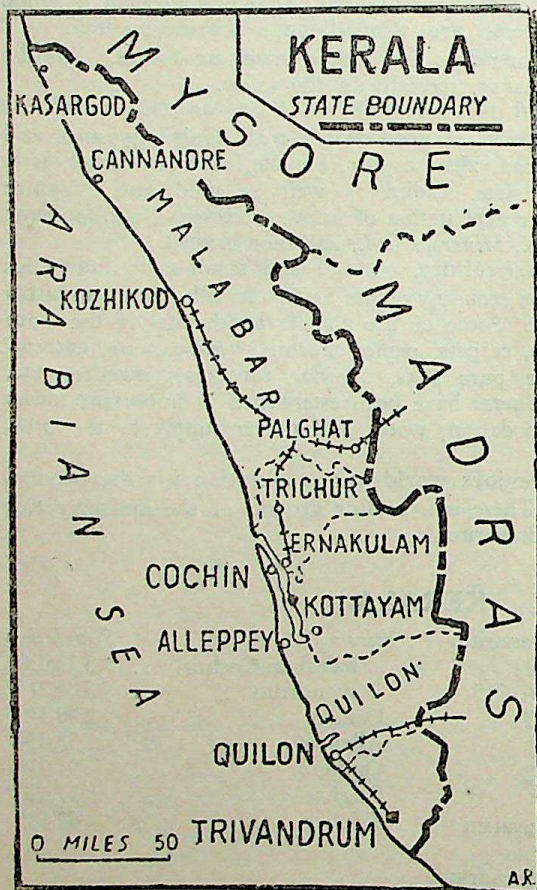
Sericulture—Kashmir enjoys world-wide reputation for the production of good-quality silk. There is a prolific growth of the mulberry tree which provides food for silk-worms.

KERALA

	.. Trivandrum	Cities :	Population
Capital	.. 15,002	Ernakulam-Cochin	.. 3,13,030
Area (sq. m.)	.. 16,903,715	Trivandrum	.. 3,02,214
Population	1,127	Calicut	.. 2,48,548
Density (per sq. m.)	.. 1,022	Alleppey	.. 1,38,834
Females per 1,000	.. 468	Quilon	.. 91,018
males	.. 468	Palghat	.. 77,620
Literacy per 1,000	.. 468	Trichur	.. 52,685
Principal Language	Malayalam		
University	.. Kerala (Trivandrum)		

Boundaries—Nestling amidst the deep blue waters of the Arabian Sea in the west and the tall ranges of the Western Ghats in the east, Kerala is a narrow but long strip of coastal territory, from Kasargode in the north to Trivandrum in the south. The distance from south to north is 360 miles, and the maximum breadth from east to west is about 80 miles.

Physical Features—According to its physical features, Kerala can be divided into three regions: the hilly region or highlands, the midlands, and the coastal belt or lowlands. The hilly region abounds in forests. The headwaters of numerous streams and rivers of Kerala are situated here. The midlands are densely populated fertile regions, extending throughout



the length of the State. The coastal region is famous for its picturesque lagoons and extensive array of coconut groves. Kerala has a total navigable length of 1,920 kilometres of waterways.

Population and Area

—The population in round figure was about 17 million in 1961. The decade 1951-61 has shown an increase of 24.76 per cent. Kerala has 3.85 p.c. of the total population of India and the highest density of population among the Indian States. It is the second smallest of the 16 States of India, occupying 1.27 p.c. of India's total area.

Literacy and Education

—Kerala stands foremost among the Indian States in percentage of literacy and in educational advancement. The rate of literacy in the State, according to 1961 census, is worked

out at 46.8 p.c. of its total population.

Climate and Rainfall—Kerala is a land of diversified climate. Due to cooling effect of the south-west monsoon which breaks out in May and continues till August, the annual variation in temperature is comparatively small. Kerala enjoys plenty of rainfall which varies from

about 200 inches in the high ranges of the Kottayam district to 64 inches at Trivandrum. On the coastal region, rainfall is heaviest in the north but gradually diminishes towards the south.

Agriculture—The agriculture in Kerala is marked by an abundance of cash crops and a shortage of food crops. 53 p.c. of the total population earns their livelihood from agriculture. The chief agricultural products of the State are rice, tapioca, coconut, arecanut, groundnut, cashewnuts, oilseeds, pepper, sugarcane, rubber, tea, coffee, cardamom, sesamum, pulses, banana etc. More than one-third of the total cropped area is under paddy cultivation. The soil of the coastal lands is particularly suited for growing coconuts. The State is famous for its hill products. The chief articles of export and earners of India's foreign exchange among agricultural crops, are cashew kernels, rubber, pepper, tea, coffee, cardamom, and other spices. The State accounts for 95 and 98 p.c. of the total Indian output of rubber and pepper respectively.

Forests—Kerala is rich in forest wealth. Forests occupy nearly 30 p.c. of the total area and contribute 1.4 p.c. of the State's total revenue. They are noted for their resources of timber including teak, ebony, rosewood, sandalwood, blackwood and varieties of soft wood of the pine family. About half the total revenue derived from the forests comes from teak. Nearly 600 species of timber are known to grow in these forests. Bamboos and cane also grow in abundance.

Minerals—Next to Bihar, Kerala possesses the widest variety of economic mineral products among the Indian States. Some of the minerals occur in much greater plenty in this State than in Bihar. The beach-sands of Kerala contain several highly valued and strategic minerals like ilmenite, monazite, rutile, zircon, and silimanite. The extensive white clay deposits in the midlands contribute to the flourishing tile and brick-making industry, and the abundant resources of mica, limestone, quartz sand, lignite and a host of other minerals mark out this region as a rich field of commercial importance. China clay or kaolin for the manufacture of porcelain is also found in certain parts of the State. Graphite deposits occur in many places. The lakes contain lime-shells used in the manufacture of cement.

Industries—The abundance of natural resources, the availability of cheap electric power and the existence of numerous rivers and waterways have contributed much to the industrial advancement of Kerala. Most of the major industrial concerns are either owned or sponsored by the Government. The 10 Government-owned industrial concerns in the State were converted into joint stock companies for obtaining greater flexibility and efficiency in working. Major industries are rubber, tea, chemicals, paper, bricks and tiles, oil, textiles, ceramics, fertilizers, sugar, cement, rayon, glass, soap, plywood, matches, aluminium, monazite, ilmenite,

rare earths, shark-liver oil, etc. The State is also noted for its fishing industry and leads all other States in fish production.

Cottage Industries—Among the cottage industries, coir-spinning and handloom are the most important ones. Other industries are the fish-oil, wood and ivory-carving, furniture-making, leather goods, mat-making, rattan work, bee-keeping, pottery, etc. Manufacture of *bidis* is an important small-scale industry, giving employment to a large number of people. Kerala leads all other States in the manufacture of coir goods.

Irrigation—Work over spillover schemes of the Second and Third Plans, such as Pothundy, Meen kara, Periyar Valley, Neyyar Stage II, Pampa, Kuttiadi, Chitturpuzha, Kanjirazha and Pazhassi, are progressing satisfactorily. On the completion of the spillover projects, an additional area of 194,000 acres will be brought under irrigation.

Districts—Alleppy, Cannanore, Ernakulam, Calicut, Kottayam, Palghat, Quilon, Trichur, Trivandrum.

MADHYA PRADESH

<i>Capital</i>	..	Bhopal	<i>Cities :</i>		<i>Population</i>
<i>Area (sq. m.)</i>	..	1,71,217	Indore	..	3,94,941
<i>Population</i>	..	32,372,408	Jabalpur	..	3,67,014
<i>Density (per sq. m.)</i>	189		Gwalior	..	3,00,587
<i>Females per 1,000 males</i>	953		Bhopal	..	2,22,948
<i>Literacy per 1,000</i>	171		Ujjain	..	1,44,161
<i>Principal Language</i>	Hindi		Raipur	..	1,39,792
<i>Universities</i>	..	Sagar, Jabalpur, Indore, Ravi Shankar (Raipur), Vikram (Ujjain), Indira Kala Sangeet (Khairagarh), Jawaharlal Nehru Krishi (Jabalpur), Jiwwaji (Gwalior).	Durg	..	1,33,239
			Sagar	..	1,04,676

Boundaries—As its very name implies, the State lies right in the heart of India and is now the biggest in India.

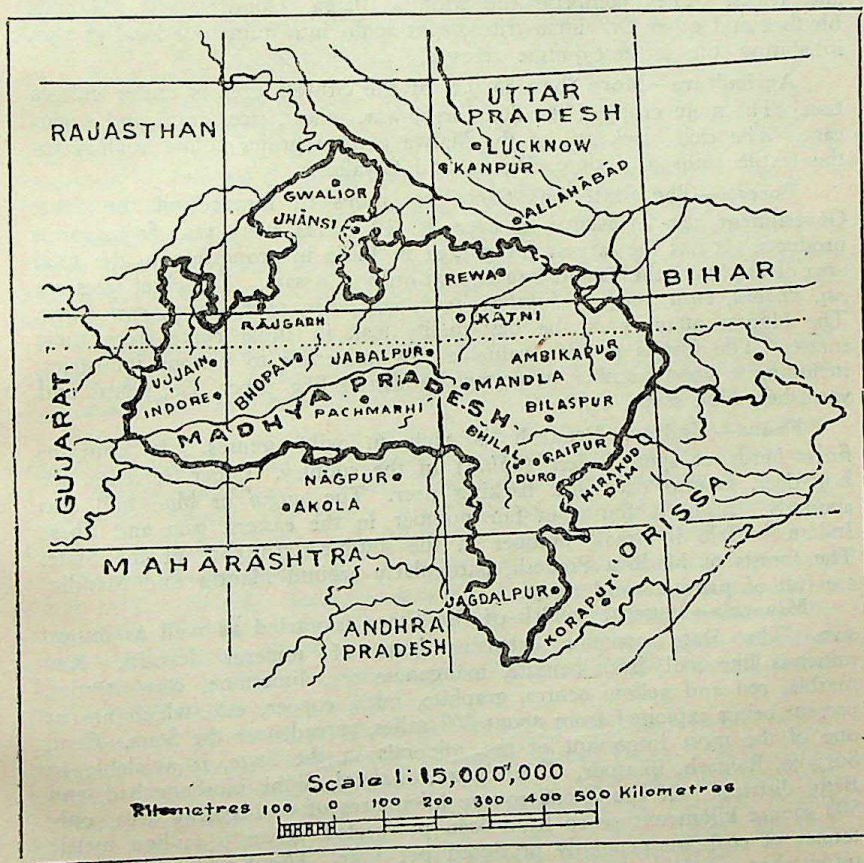
Physical Features—Except for the valleys of the Narmada and the Tapti, Madhya Pradesh consists of a plateau with a mean elevation of 1,600 ft. above sea-level, interspersed with the mountains of the Vindhya and the Satpura ranges, and the Chhatisgarh plains to the east.

River System—The State has the mighty river system of the Narmada, Tapti, Mahanadi, Chambal, Betwa, and Wainganga, which can irrigate million of acres and produce cheap electricity.

Climate & Rainfall—Average rainfall is different in the different regions of the State, ranging from 30 to 60 inches. The climate is extreme

in the north, temperate and breezy in the plateau and generally hot and humid in the eastern and southern plains.

Population and Area—The population of Madhya Pradesh in round figure was 32 million in 1961. It has 7.38 p.c. of India's total population and ranks first in India with 14.54 p.c. of India's total area.



Race & Language—Perhaps few other States in India will compare itself with Madhya Pradesh in the diversity of ethnical contribution. This is reflected in the variety of dialects spoken all over the State. As many as 377 names of languages and dialects were returned as mother

tongue at the 1951 census. Two elements dominate the racial mosaic of Madhya Pradesh: the *Indo-Aryan* and the *aboriginal*. Those in the northern areas and in the Narmada valley are largely from the Indo-Aryan stock. The southern and the eastern areas contain a large proportion of the aboriginal tribes. One out of every seven people in Madhya Pradesh belongs to the tribes. 30 p.c. of the people belongs to scheduled castes and tribes. They comprise the Munda, Baiga, Gond, Maria, Mandia, Bhathra and other Dravidian tribes, split again into numerous local groups, inhabiting the farthest jungle recesses.

Agriculture—More than 56 p.c. of the State's area is under cultivation. The main crops of the State are jawar, wheat, rice, gram and sugarcane. The rich black soil of the Malwa plateau grows cotton mainly for the textile mills at Indore, Ujjain, and Gwalior.

Forests—The State has 66,666 sq. miles of forest and the State Government gets a revenue of over Rs. 10 crores every year from forest products. It has the largest forest area in India in proportion to the total area of the State, the second largest next only to Assam. The chief trees are *saj*, *dhaora*, *enlu*, *mahua*, *bamboo*, *teak*, *sal*, *palas*, *salai*, *anjan*, and *harra*. The biggest quantity of the best-quality teak in India come from these forests. The forests provide valuable raw materials to various industries, including a good number of cottage industries like paper, lac, paints and varnishes, *bidi*, soaps, etc.

Fauna—Madhya Pradesh is rich in wild games. It contains finest herds of spotted deer (*chital*) in the country. Other varieties are hog deer, swamp deer and barking deer. The *nilgai* or blue bull also abounds. Bison is found in fair number in the eastern part and finest Indian buffalo in small number in the south-eastern part of the State. The forests of Madhya Pradesh, particularly around Mandu and Mandla, are full of panthers and tigers.

Minerals—Mineral wealth of the State is varied as well as extensive. The State contains extensive belts of mineral deposits. Key minerals like coal, iron, bauxite, manganese ore, limestone, clay, steatite, marble, red and yellow ochres, graphite, mica, copper, etc., which are at present being exploited from about 200 miles, spread over the State. Coal, one of the most important of the minerals in the State, is available in Surguja, Raigarh, Bilaspur, Chhindwara, Shahdol, Sidhi, Hoshangabad, and Betul districts. Of the 25,600 square kilometres of coal-bearing area, only 500 square kilometres or so have been prospected. Over 6 million metric tonnes of coal are generally produced per year. The Korba coal mines, undertaken jointly by the Government of India and the State Government, are expected to produce 4 million tons of coal annually, which will make up about 7 p.c. of the total coal production of India. The resources of iron in the State are extensive. Bailadela in Bastar district is supposed to contain

the world's richest resources of iron ore. Ores are mainly confined to Durg, Bastar, Jabalpur, Chhatarpur, and Hoshangabad districts.

With the setting up of a million-ton steel plant at Bhilai, which has started production, the real recognition of the mineral resources of Madhya Pradesh has begun. Manganese ore which is vital to steel industry, is found mainly in Balaghat, Chhindwara, Seoni and Jhabua districts. Madhya Pradesh contributes nearly 65 p.c. of the total production of this ore in India, which in turn ranks next to Russia. Large reserves of bauxite, about 200 million tons, occur in the districts of Shahdol, Bilaspur, Mandla, Jabalpur, Raigarh, Surguja, and Balaghat. Limestone, an essential ingredient in the manufacture of cement, is found extensively in the plateau. The diamond mine at Panna has become world-famous. A Corporation named *M. P. Mineral Corporation Ltd.* as a Government concern, has been formed to develop and explore mineral resources of the State.

Industries—There are several big industries like Bhilai Steel Plant, Heavy Electricals, Nepa Paper Mills, etc. in the State. A Security Paper Mill is under construction at Hoshangabad. Construction work for a big fertilizer factory at Korba has been started.

The State has already 20 textile mills with nearly 12,500 looms and 515,000 spindles, 3 cotton ginning and pressing factories, 5 sugar mills, 6 potteries, 3 art silk mills, 2 glass works, 3 cement factories.

The number of small-scale industries is 12,000. The State is running through the M. P. Industries Corporation, 6 medium-scale industries, *viz.*, (1) Gwalior Potteries, (2) Govt. Tent and Leather Factory, (3) Govt. Engineering Works, (4) Power Alcohol Plant, (5) Cotton Seed Solvent Extraction Plant (Ujjain), and (6) Cotton Spinning Mill (Sanawal).

Power Projects—The State has a hydroelectric potential of about 4,500 MW. 60-MW. Amarkantak thermal station was commissioned in May, 1965. 90-MW. Korba thermal station is supplying power to the Bhilai Steel Plant. 69-MW. Gandhisagar hydel station is also completed. The first units of 300-MW. Satpura station and a 200-MW. thermal station at Korba are under construction.

Districts of Madhya Pradesh—Balaghat, Bastar, Betul, Bhind, Bilaspur, Chhatarpur, Chhindwara, Damoh, Datia, Dewas, Dhar, Durg, Gwalior, Guna, Hoshangabad, Indore, Jabalpur, Jhabua, Mandla, Mandsaur, Morena, Narsimhapur, Nimar East, Nimar West, Panna, Raigarh, Raipur, Raisen, Rajgarh, Ratlam, Rewa, Sagar, Satna, Sehore, Seoni, Shahdol, Shajapur, Shivpuri, Sidhi, Surguja, Tikamgarh, Ujjain, Vidisha.

MADRAS

		<i>Cities :</i>	<i>Population</i>
<i>Capital</i>	.. Madras	Madras ..	.. 17,29,141
<i>Area (sq. m.)</i>	.. 50,331	Madurai ..	.. 4,24,810
<i>Population</i>	.. 3,36,86,953	Coimbatore ..	.. 2,86,305
<i>Density (per sq. m.)</i>	.. 669	Tiruchirapalli ..	.. 2,49,862
<i>Females per 1,000 males</i>	.. 992	Salem ..	.. 2,49,145
<i>Literacy per 1000</i>	314	Palayamkottai ..	.. 1,90,048
<i>Principal Language</i>	Tamil	Tuticorin ..	.. 1,27,356
<i>Universities</i>	.. Madras, Anna- malai (Annamalainagar).	Vellore ..	.. 1,22,761
		Kurichi ..	.. 1,19,380
		Thanjavur ..	.. 1,11,099
		Nagercoil ..	.. 1,06,207

Boundaries—Bounded by Mysore State and Andhra Pradesh on the north, the Bay of Bengal on the east, and the range of the Western Ghats on the west, Madras is the 10th largest State in area in India and the 5th largest by population. It is the southernmost State of the Republic.

River System—Scarcity of water becomes pronounced after the reorganisation of the State. The State has only one big river, the Cauvery whose waters have already been utilised fully. Other smaller rivers have all been harnessed.

Population and Area—The population of the State in round figure was 34 million in 1961. Madras has 7.68 p.c. of the total population of India, occupying 4.27 p.c. of India's total area. The decade 1951-61 has shown an increase of 11.85 p.c.

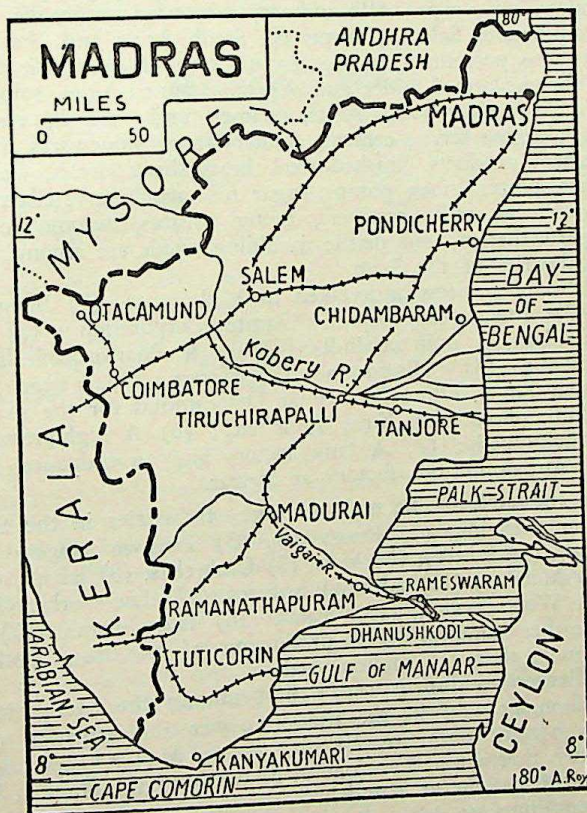
Agriculture—Agriculture is the main occupation of the people. 61.54 per cent of the population depend on agriculture.

The principal commercial crops of the State are groundnut, cotton, sugarcane, gingelley, coconut, tobacco, coffee, tea, pepper, and rubber. The staple food crops of the State are paddy, millets, ragi, pulses, *bajra*, *jowar*, small millets, onions, potatoes, sweet potatoes, and tapioca. Bananas, mangoes, and citrus are the most important fruit crops of the State. Madras is one of the two quinine-producing States in India.

Madras accounts for about 22 p.c. of the total production of groundnuts and about 10 p.c. of the total production of sesamum in the country. The share of Madras in sugarcane was 7 p.c. and in tobacco 8 p.c. in 1963-64. As much as 15 p.c. of the total coffee crop and 12 p.c. of the tea crop in 1963 came from this State.

Forests—Area covered by reserved forests is 17,236 sq. km. The extent of forest area to total land area of the State is 13.2 p.c. Timber, fuel, bamboos, sandalwood, tan barks are main forest products. While the West Coast forests provide such well-known timber species as *teak* and *rosewood*,

the comparatively dry forests in the eastern districts contain valuable sandalwood in which India holds almost a world monopoly. The timber forests are mostly confined to the high-rainfall region of the Western Ghats in Coimbatore, Madurai, and Tirunelveli districts, with more than 40 marketable species. Next to teak, *sandalwood* is the most important forest product.



Minerals—Madras has some basic minerals, such as *bauxite*, *gypsum*, *limestone*, *magnesite*, *mica*, *quartz*, *feldspar*, *salt*, *corundum*, *fire-clay*, etc. The lignite (brown coal) estimated to be 2,000 million tons and found in South Arcot district, will be mined and utilized in the Neyveli Lignite Project. Magnesite, bauxite and iron ores occur in Salem district.

Industries—*Cotton textiles* is one of the major industries. There are at present 131 spinning mills in the State. Madras is noted for tanning industry. The State exports to the foreign markets hides and skins valued at more than 11 crores of rupees per annum. Other industries, both perennial and seasonal, include hosiery, silk, woollen, foundries, iron and steel, tea and coffee, breweries, rice, bones and manures, chemicals, oil, sugar, tobacco, matches, potteries, lime, paints, soaps, paper, printing, bricks and tiles, glass, saw, rope. Silk industry is carried on in the districts of Nilgiris, Coimbatore, Salem, Tirunelveli, South Arcot and North Arcot.

State is also prominent in the manufacture of *vanaspati*, cotton yarn and cloth, chrome-tanned hides and vegetable-tanned hides, sulphuric acid, caustic soda, superphosphate, paints, enamels and varnish, soap, carbon dioxide gas, alumina ferric, cement, sanitarywares, stonewares, refractories, asbestos, cement products, finished steel, brass sheets/circles, wood screws, diesel engines, power-driven pumps, sugar mill machinery, electric motors, power transformers, radio receivers, motor starters, automobiles, bicycles and spare parts thereof, and plastic moulding goods are among the major organised industries of the State.

Central Sector projects undertaken in Madras are—(1) Integral Coach Factory; (2) Integrated Neyveli Lignite Corporation; (3) Surgical Instruments Plant, a unit of Indian Drugs & Pharmaceuticals Ltd., at Nandambakkam; (4) Hindustan Teleprinters Ltd., near Guindy; (5) Hindustan Photo Films Factory at Ootacamund for the manufacture of cinema film, photo film, X-ray films etc.; (6) A high-pressure boiler plant at Tiruchirapalli; (7) A tank factory and an ordnance factory at Avadi; (8) An aluminium factory at Mettur.

Cottage Industries—The main cottage industries in the State are: (1) Handloom weaving, (2) Brasswares, (3) Palmyra jaggery products, (4) Coir goods, (5) Pottery, (6) Mats, (7) Umbrellas, (8) Khadi, (9) Stone utensils, (10) Matches, (11) Aluminiumwares, (12) Lac works, (13) Glass bangles, (14) Wood-carving, (15) Slates, (16) Ivory works, (17) Leather goods and leather tanning. The production of handloom cloth during 1963-64 was more than 115 million yards.

Power Projects—Madras ranks first among the States in hydro-electric development and in the use of power for irrigation purposes. The more important ones are *Pykara*, *Moyar*, *Mettur*, *Papanasam*, and *Periyar* and two thermal stations, one at Madras and the other at Madurai. There are also 4 stations at Kundah.

Madras continues to lead all other States in rural electrification of 19,383 towns and villages in the State. It continues to be third in the generation and utilization of power, Maharashtra and West Bengal leading.

Irrigation Projects—(1) *Lower Bhavani* (Coimbatore and Tiruchirappalli districts); (2) *Mettur* (Salem and Coimbatore districts); (3) *Aranian* (Chingleput district); (4) *Amravati* (Coimbatore district); (5) *Sathanur*

(North and South Arcot districts) and (6) *Parambikulam-Aliyar Project* (Coimbatore district).

Districts of Madras (*with headquarters within brackets*)—Chingleput (*Saidapet*), Coimbatore (*Coimbatore*), Kanyakumari (*Kanyakumari*), Madras (*Madras City*), Madurai (*Madurai*), Nilgiris (*Ootacamund*), North Arcot (*Vellore*), Ramanathapuram (*Madurai*), Salem (*Salem*), South Arcot (*Cuddalore*), Thanjavur (*Thanjavur*), Tiruchirappalli (*Tiruchirappalli*), Tirunelveli (*Tirunelveli*).

MAHARASHTRA

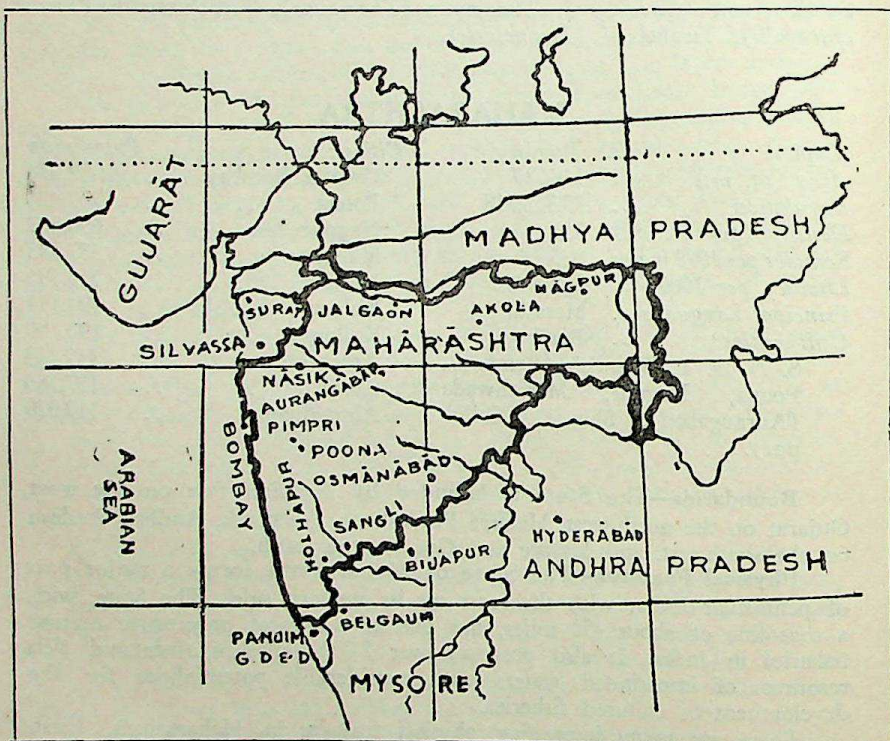
<i>Capital</i>	..	Bombay	<i>Cities :</i>		<i>Population</i>
<i>Area (sq. m.)</i>	..	118,717	Greater Bombay	..	41,52,056
<i>Population</i>	..	39,553,718	Poona	..	757,426
<i>Density (per sq. m.)</i>	..	333	Nagpur	..	690,302
<i>Females per 1000 males</i>	..	936	Sholapur	..	337,583
<i>Literacy per 1000</i>	..	298	Nasik	..	215,596
<i>Principal Language</i>	..	Marathi	Kalyan	..	194,334
<i>Universities</i>	..	Bombay,	Kolhapur	..	193,186
		S. N. D. T. Women's (Bombay),	Amravati	..	137,442
		Poona, Nagpur, Marathwada	Sangli	..	127,183
		(Aurangabad), Shivaji (Kolha-	Ahmednagar	..	119,020
		pur).			

Boundaries—The State is bounded by Arabian Sea on the west, Gujarat on the north-west, Madhya Pradesh on the north, Andhra Pradesh on the south-east, and Mysore and Goa on the south.

Physical Features—The State of Maharashtra forms a major part of peninsular India, with the coast on its western side. The State, with a coast-line of about 450 miles, has one of the most progressive marine fisheries in India. It also possesses over 2,000 miles of river and rich resources of impounded waters with considerable potentialities for the development of cultured fisheries.

There are many interesting physical features in Maharashtra. First, there is a solid land-mass known as Deccan Lavas or *Deccan Trap*. This Deccan Trap is due to the formation of big fissures caused in more or less flat land, which extruded hot boiling lava that flowed in intermittent waves over an area of some 2 lakh square miles on the land surface. This layer upon layer was deposited, forming the solid land-mass known as Deccan Trap. The Western Ghats run close and almost quite parallel to the west coast, leaving a very narrow strip of land between the sea and the lofty mountain barrier, which is at no place more than 60 miles in breadth. This narrow strip of land from Daman to Vengurla is a distance of 350 miles, and is known as *Konkan*. Sandwiched between the

sea on one side and steep mountain face on the other, Konkan is a land of extreme humidity and heavy rainfall. In the north is the Satpura range which runs almost in a straight line from east to west. Thus, the Western Ghats running north-east and the Satpuras running east-west, with their meeting point in the north-east of Dhulia district, hold between them the vast plateau of the Deccan.



Rainfall—So far as rainfall is concerned, there is a considerable variation in different parts of the State. Heavy rainfall spills over the Ghats and the coastal districts of Thana, Kolaba, and Ratnagiri. In places in the Ghats, it is more than 120 inches, while the annual average is 80 inches. The major part of the State, however, lies in the rain shadow of the Ghats, with the rainfall average around 25 to 30 inches and in some areas even less than 20 inches.

Population and Area—Maharashtra had in round figure a population of 40 million in 1961. The decade 1951-61 has shown an increase of 23.60 p.c. The State has 9.5 p.c. of India's total population and 9.4 p.c. of

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the total area of India, occupying 3rd place in area. The urban population is 28.2 p.c. of its total population compared to India's 18 p.c.

Agriculture—Agriculture is the bulwark of the State's economy and the peasantry forms 64 per cent of the State's population. The per cent of the net sown area in the State is as high as 58 as against 44½ p.c. in the Indian Union. Oilseeds and cotton are the chief cash crops of the State. Among the various oilseeds grown in different districts of the State, groundnut and linseed are in leading position. Nagpur oranges, grown in Nagpur, Amravati, and Wardha districts, have about 2,41,000 acres under them, with an annual production of a little less than one lakh ton. Agriculture and other allied activities contribute about 38 p.c. of the State's income, as against 45 p.c. for the country as a whole.

Forests—The total forest area in the State is 157.18 lakh acres or 20.7 p.c. or one-fifth of the geographical area of the State. The forest areas are thickly concentrated mainly in Chanda, Amravati, Yeotmal, Bhandara, Nagpur, Dhulia, Thana, and Nasik districts. The most important timber species of the State is *teak*. Other important species are *Chandan*, *Ain*, *Shisam*, *Bijasal*, *Babul*, *Khari*, *Haldu*, and *Semul*. Minor forest products are—(1) fibres and flosses, (2) grass, bamboos and canes, (3) distilled and extracted products, (4) tans and dyes, (5) gums and resins, (6) animal and mineral products.

Minerals—The northern parts of Bhandara and Nagpur districts have rich deposits of manganese ore. Quarrying of limestone around Wani-Manjiri in Yeotmal district and in some parts of Chanda district is carried on in an extensive scale. The only coal-bearing area of the State, having extensive reserves of first-grade and medium-grade coal, is in Nagpur division and in a part of the Marathwada region. The major coal occurrences are, however, confined to the districts of Chanda, Nagpur and Yeotmal in Nagpur division, where 10 collieries are in operation at present. Nagpur and Bhandara districts possess some of the largest deposits of manganese ore in India. There are over 200 working mines in these 2 districts. Iron ore occurrences are known in many districts, and the most important of them are confined to Ratnagiri, Chanda, Nagpur, and Bhandara districts. Bauxite, the main raw material for the production of metal aluminium, is found in Kolhapur, Kolaba, Sangli, Ratnagiri, and Thana districts. Limestone occurs in various places and in various geological formations. The most important occurrences are confined to Vindhyan formations occurring in Yeotmal and Chanda districts. Chromite occurs in Ratnagiri and Bhandara districts. Extensive deposits of ilmenite are known to exist in Ratnagiri district. Silica sand or glass is available in Ratnagiri district.

Industries—Important items of industry in Maharashtra are cotton textiles, general and electrical engineering, chemicals, sugar, vegetable products, paper boards, and soaps. Among these, textile industry is by far the

foremost and the largest, employing as it does about 3 lakh workers out of 7 lakh workers employed in 8,036 factories of the State. Maharashtra is one of the major sugar-producing States in the country, having 26 sugar factories with a crushing capacity of 24,800 tons per day. Chemical industry in the State is developing fast and expanding to cover a very wide variety of products. There are in all 4 paper mills in the State. Ginning and pressing is an important processing industry serving cotton-growing areas. There are about 600 such factories all over the State. Along with the growth of sugar factories, there has been considerable development in the production of industrial alcohol made wholly from molasses.

Irrigation—Only about 6 p.c. of the cropped area in the State has irrigation facilities as compared to 20 p.c. for the country. Among the projects, the names of Mula, Ghod, Yeldari, Mosam, Radhanagari, Gangapur, Ekburjee, Morna, Gyanganga, Khuni, Wunna, Bendsura, Dhekum etc. may be mentioned.

Districts of Maharashtra—Ahmednagar, Akola, Amravati, Aurangabad, Bhandara, Bhira, Buldana, Chanda, Dhulia, Bombay Suburban, Jalgaon, Kolaba, Kolhapur, Nagpur, Nanded, Nasik, Osmanabad, Parbhani, Poona, Ratnagiri, Sangli, Satara, Sholapur, Thana, Wardha, Yeotmal.

MYSORE

<i>Capital</i>	..	Bangalore	<i>Cities :</i>	<i>Population</i>
<i>Area (sq. m.)</i>	..	74,210	Bangalore	.. 1,206,961
<i>Population</i>	..	23,586,772	Mysore	.. 253,865
<i>Density (per sq. m.)</i>	..	318	Hubli-Dharwar	.. 248,489
<i>Females per 1000 males</i>	..	959	Mangalore	.. 170,253
<i>Literacy per 1000</i>	..	254	Kolar Gold Fields	.. 146,811
<i>Principal Language</i>	..	Kannada	Belgaum	.. 146,790
<i>Universities</i>	..	Mysore, Karnatak	Gulbarga	.. 97,069
		(Dharwar), Bangalore, Agricul-	Bellary	.. 85,673
		tural Science (Hebbal).	Bijapur	.. 78,854
			Davangere	.. 78,124

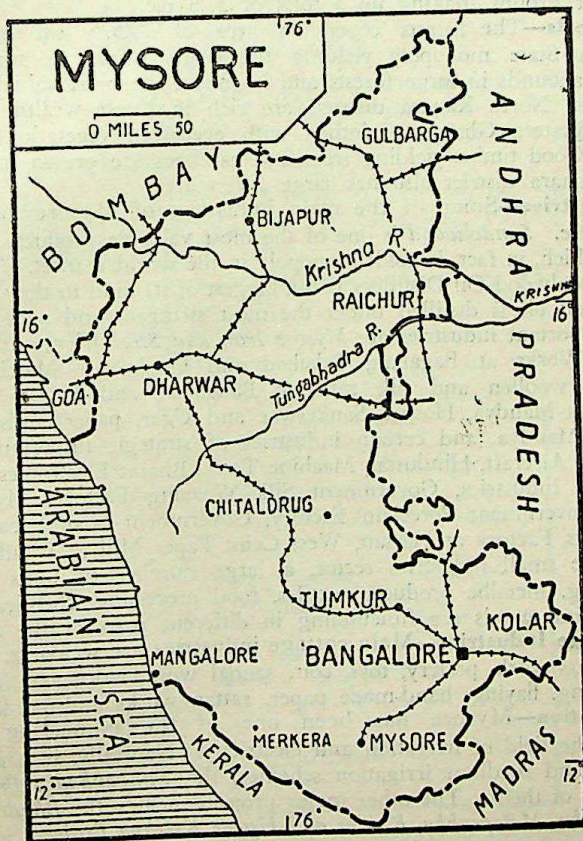
Boundaries—The State is bounded on the east by Andhra Pradesh, on the north by Maharashtra and on the south by Madras State and Kerala, its western boundary being washed by the Arabian Sea for about 200 miles.

Agriculture—The State has different types of climate to suit diversified cultivation. Tropical as well as sub-tropical crops are being grown in one season or other and in one part of the State or other. It stands 5th among the States of India in the matter of area under cultivation.

Mysore ranks 1st in India in the production of coffee and ragi crops. Compared with the all-India acreage under different crops, the State has Coffee : 66 p.c., Cardamom : 35 p.c., Arecanut : 25 p.c., Coconut : 15 p.c.,

Groundnut : 13.8 p.c., Jawar : 17 p.c., Cotton : 13.4 p.c. and Tobacco : about 10 p.c. Salubrious climate in several parts of the State provides vast scope for fruit cultivation, floriculture and bee-keeping.

Physical Features—Physically, the original Mysore divides itself into 3 regions: the *Maidan* or plain country, comprising roughly the districts of Bangalore, Tumkur, Chitradurga, Kolar, Mandya and Mysore; the *Malnad* or hill country, comprising the districts of Chickmagalur, Hassan and Shimoga; and the coastal belt, a part of the tableland called *Konkan*.



Rainfall—The Malnad tracts receive heavy rainfall. The whole of North Kanara, South Kanara and Coorg districts and the western parts of the Shimoga and Chickmagalur districts are high-rainfall regions.

Population and Area—The population of the State in round figure was 24 million in 1961. The decade 1951-61 has shown an increase of 21.57 p.c. Mysore has 5.38 p.c. of the total population and 6.30 p.c. of the total area of India, ranking 6th in area.

Language—Kannada is the principal language and the mother tongue of 62.2 p.c. of the population. It is the language of administration and of instruction and is the principal language in all districts except Kolar where it is second to Telugu. There are about 16 other languages spoken by minor groups making up a total of 37.8 p.c.

Forests—The forests cover an area of 13,575 sq. miles. Sandal tree is a State monopoly yielding the largest share of forest revenue. Bamboo abounds in large forests and is one of the most valuable products. Coorg and North Kanara districts are rich in forest wealth. The slopes of the Western Ghats are clothed with evergreen vegetation with dense forests. Good timber-yielding trees and bamboos are grown in abundance. South Kanara district also has large forest area.

Industries—Some of the main industries of Mysore may be mentioned here. *Sandalwood* is one of the most valuable products of the State and in which, in fact, it holds monopoly in the world market. The Government Sandalwood Oil Distillery is the biggest of its kind in the world, where sandalwood oil is distilled under the most stringent and scientific control. Other important industries are *Mysore Iron and Steel Works* at Bhadravati, Cement Works at Bagalkat, Sahabad and Bhadravati, Match Works at Shimoga, woollen and silk mills at Bangalore and Mysore City, sugar factories at Mandya, Hospet, Sankeswar and Ugar, paper mills at Bhadravati and Mandya, and certain industries of strategic importance, such as Hindustan Aircraft, Hindustan Machine Tools, Bharat Electronics and Indian Telephone Industries, Government Silk Weaving Factory, Mysore Lamp Works, Government Porcelain Factory, Government Soap Factory, Mysore Implements Factory at Hassan, West Coast Paper Mill at Dandeli, etc.

In the small industries sector, a large number of units in general engineering, metallic products, textiles, food processing, chemical and dyes and electrical goods are functioning in different parts of the State.

Cottage Industries—Main cottage industries are weaving, ornamental works, brass work, pottery, toys, coir, sandal work, ivory and inlay works, mat-weaving, flaying, hand-made paper, rattan works and bee-keeping.

Irrigation—Mysore has been one of the pioneering States in India in the field of irrigation and electricity. Naturally, it has a number of major and medium irrigation schemes, the *Tungabhadra Project* being the largest of them. The other major projects include the *Bhadra Reservoir*, *Ghataprabha*, *Malaprabha*, *Kabini* and *Upper Krishna Projects*, all of which are under various stages of progress. After full development and completion, these major projects alone would irrigate over 24 lakh acres in different parts of the State.

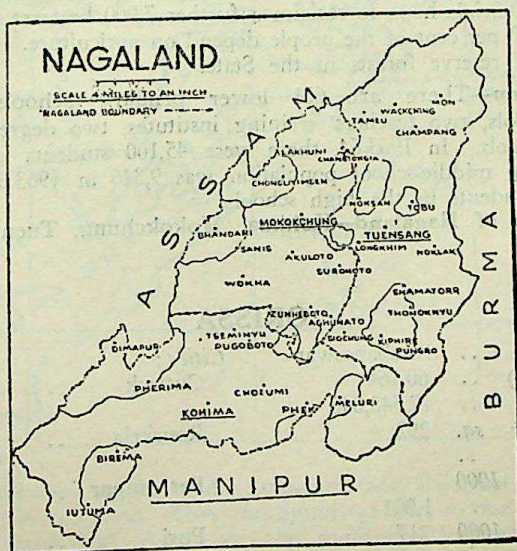
Power Projects—The three important hydro-electric projects undertaken are : (1) *Sharavathi Hydro-electric Project*, (2) *Bhadra Hydro-electric Project*, and (3) *Tungabhadra Hydro-electric Project*. The electrification of the rural and power supply to agricultural pumps has been taken up on an intensive scale by the State Electricity Board.

Districts of Mysore—Bangalore, Belgaum, Bellary, Bidar, Bijapur, Chickmagalur, Chitradurga, Coorg, Dharwar, Gulbarga, Hassan, Kolar, Mandya, Mysore, North Kanara, Raichur, Shimoga, South Kanara, Tumkur.

NAGALAND

<i>Capital</i>	..	Kohima	<i>Females per 1000 males</i>	933
<i>Area (sq. m.)</i>	..	6,366	<i>Literacy per 1000</i>	.. 179
<i>Population</i>	..	3,69,200	<i>Principal Language</i>	.. Assamese
<i>Density (per sq. m.)</i>	58			

Nagaland was declared the 16th State of India on par with the other 15 States of the Indian Republic on 1st December, 1963, enjoying full representative Government.



Area—Nagaland is a narrow strip of mountainous territory between the Brahmaputra valley of Assam and Burma. The State is covered with ranges of hills in height from 2,000 to 10,000 feet. Fifteen years ago there were only about 150 miles of roads and most of the 850

villages in the State could not be approached by motor or vehicular transport. Now 2,240 kilometres of roads link almost all important places.

Race—The Nagas are an Indo-Mongoloid people numbering between 5 and 6 lakhs. Most of them live in Nagaland. They are divided into 15 to 20 main tribal groups and speak in many languages and dialects. Though the term Naga is applied loosely to those living mainly in Nagaland, there is a sizeable minority in Manipur (1,25,000) and in Tirap division (40,000) of NEFA. Majority of the people are Christians and it is the only State with Cristian majority in India. The tribes use different languages but all use Roman script which facilitates the growth of English literacy. Assamese is the means of communication within different tribes.

Agriculture—is the mainstay of the State. Terraced cultivation in the Angami area, Kohima district, is famous all over. 'Jumming' fields (shifting cultivation) are gradually giving way to terraced fields in the other two districts also. Although nature has been kind—rain is adequate and soil is fertile—the land available for the cultivation of agriculture is not enough for a greater measure of self-sufficiency. Out of a total cultivable area of 7 lakh acres, more than 2,000 hectares (about 5,000 acres) of land were reclaimed between 1957 and 1960 and 3,000 hectares between 1961 and 1964. Officials hope to reclaim a further 7,000 hectares in near future. More than 80 per cent of the people depend on agriculture. There are only 127 miles of reserve forests in the State.

Education—There are 651 lower primary schools, 109 middle English schools, two teachers' training institutes, two degree colleges and 23 high schools. In 1963-64, there were 45,100 students in the primary schools. The middle-school population was 9,346 in 1963-64. There are now 3,070 students in the high schools.

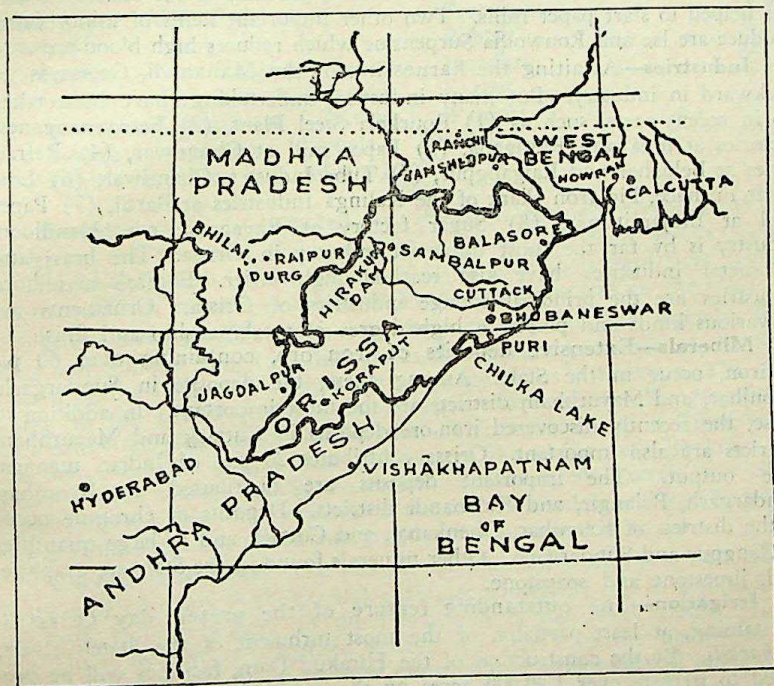
Districts of Nagaland—Kohima, Mokokchung, Tuensang.

ORISSA

<i>Capital</i>	..	Bhubaneswar	<i>Cities :</i>		<i>Population</i>
<i>Area (sq. m.)</i>	..	60,164	Cuttack	..	.. 146,308
<i>Population</i>	..	17,548,846			
<i>Density (per sq. m.)</i>	..	292	Rourkela	..	.. 90,287
<i>Females per 1000 males</i>	..	1,001	Berhampur	..	.. 76,931
<i>Literacy per 1000</i>	..	217	Puri	..	.. 60,815
<i>Principal Language</i>		Oriya			
<i>Universities</i>	..	Orissa Univ. of Agriculture & Technology	Sambalpur	..	.. 38,915
		Utkal Univ. (Bhubaneswar).	Bhubaneswar	..	.. 38,211

Boundaries—Orissa is bounded on the south-west and north-east by Andhra Pradesh and West Bengal respectively. Bihar and Madhya Pradesh lie on its north-west and west, and the blue waters of the Bay of Bengal wash its south-eastern shores.

Physical Features—The whole State lies in the tropical zone and is divided into four distinct tracts, namely, the northern plateau, the Eastern Ghats, the central tract and the coastal plains. There are 300 miles of sea-board.



River System—The Mahanadi, Brahmani, and Baitarani are the three principal rivers in the State. They run almost parallel to one another from north-west to south-west. There are also some smaller rivers.

Climate & Rainfall—The cold weather lasts from November to February. The hot weather begins in March and terminates with the advent of monsoon in June, which continues till the month of October. The average rainfall in the northern districts is about 60 inches, while in the southern districts, it is about 50 inches.

Population and Area—The population of the State in round figure was 18 million in 1961. The decade 1951-61 has shown an increase of 19.82 per cent. Orissa has 4.00 p.c. of the total population and 5.11 p.c. of the total area of India ranking 9th in area.

Forests—occupy about 25,459 sq. miles, i.e., about 40 p.c. of the State's land area. The timber species of the State are as follows—*sal*, *piasal*, *saghan*, *rosewood*, *gambar*, *bandhan*, and *haldu*. Of the minor produce, the most important is the *kendu* leaves, which are in great demand for the manufacture of *bidi*. The next in importance is the bamboo which has helped to start paper mills. Two other important items of minor forest produce are lac and *Rouwolfia Surpentine* which reduces high blood-pressure.

Industries—Awaiting the harnessing of the Mahanadi, Orissa is yet backward in industry. But many industrial undertakings have been taken up in recent years, such as (1) Rourkela Steel Plant, (2) Ferro-manganese factories at Joda and Rayagada, (3) Paper mill at Choudwar, (4) Refractories at Belpahar and Rajgangpur, (5) Tube Industry, Chandwar, (6) Low Shaft Furnace, Pig Iron Plant of the Kalinga Industries at Bartil, (7) Paper mill at Brajarajnagar, (8) Sugar factory at Ravagada, etc. Handloom industry is by far the most universal industry in Orissa. The brass and bell-metal industries have also reached high order. Filigree and horn industries are the principal cottage industries of Orissa. Ornaments are of various kinds and possess a high degree of workmanship and finish.

Minerals—Extensive deposits of iron ore, containing over 60 p.c. of iron, occur in the State. Among these, the deposits in Sundargarh, Keonjhar, and Mayurbhanj districts are the most important. In addition to these, the recently discovered iron-ore deposits in Cuttack and Mayurbhanj districts are also important. Orissa contributes 20 p.c. of Indian manganese output. The important deposits are distributed in Keonjhar, Sundargarh, Bolangir, and Kalahandi districts. Deposits of chromite occur in the districts of Keonjhar, Dhenkanal, and Cuttack and in large quantities in Gangpur and Sundargarh. Other minerals found in the State are graphite, coal, limestone and soapstone.

Irrigation—The outstanding feature of the present-day Orissa is the taming, at least partially, of the most turbulent of the State's rivers, *Mahanadi*. By the construction of the Hirakud Dam, facilities will be provided to irrigate over 1,40,000 acres by the completion of the delta irrigation project. The first stage of the Hirakud Dam Project has been substantially completed.

Power Projects—By the end of the Second Plan, the Machkund Hydro-electric Project and the first stage of the Hirakud Project had been completed and power of about 116 kw. was available from these 2 projects.

Districts of Orissa—Balasore, Bolangir, Cuttack, Dhenkanal, Ganjam, Kalahandi, Keonjhar, Koraput, Mayurbhanj, Baudh-Khondmals, Puri, Sambalpur, Sundargarh.

PUNJAB

<i>Capital</i>	..	Chandigarh	<i>Cities :</i>		
<i>Area (sq. m.)</i>	..	47,205	Amritsar	..	398,407
<i>Population</i>	..	20,306,812	Jullundur	..	265,030
<i>Density (per sq. m.)</i>	..	431	Ludhiana	..	244,032
<i>Females per 1000 males</i>	..	864	Ambala	..	181,747
<i>Literacy per 1000</i>	..	242	Patiala	..	125,236
<i>Principal Languages</i>	..	Punjabi & Hindi	Chandigarh	..	99,262
<i>Universities</i>	..	Punjab (Chandigarh), Kurukshetra (Kuru-kshetra), Punjabi (Patiala), Punjab Agricultural (Ludhiana).	Ferozepur	..	97,932
			Rohtak	..	88,193
			Jagadhri	..	84,307
			Karnal	..	72,109
			Panipat	..	67,026
			Hissar	..	60,222

Boundaries—It is bounded by Pakistan beyond rivers Ravi and Sutlej on the west and China on the north-east, Kashmir and a portion of Himachal Pradesh on the north and Uttar Pradesh beyond river Jamuna on the east. It extends to the great prairies of Rajasthan in the south.

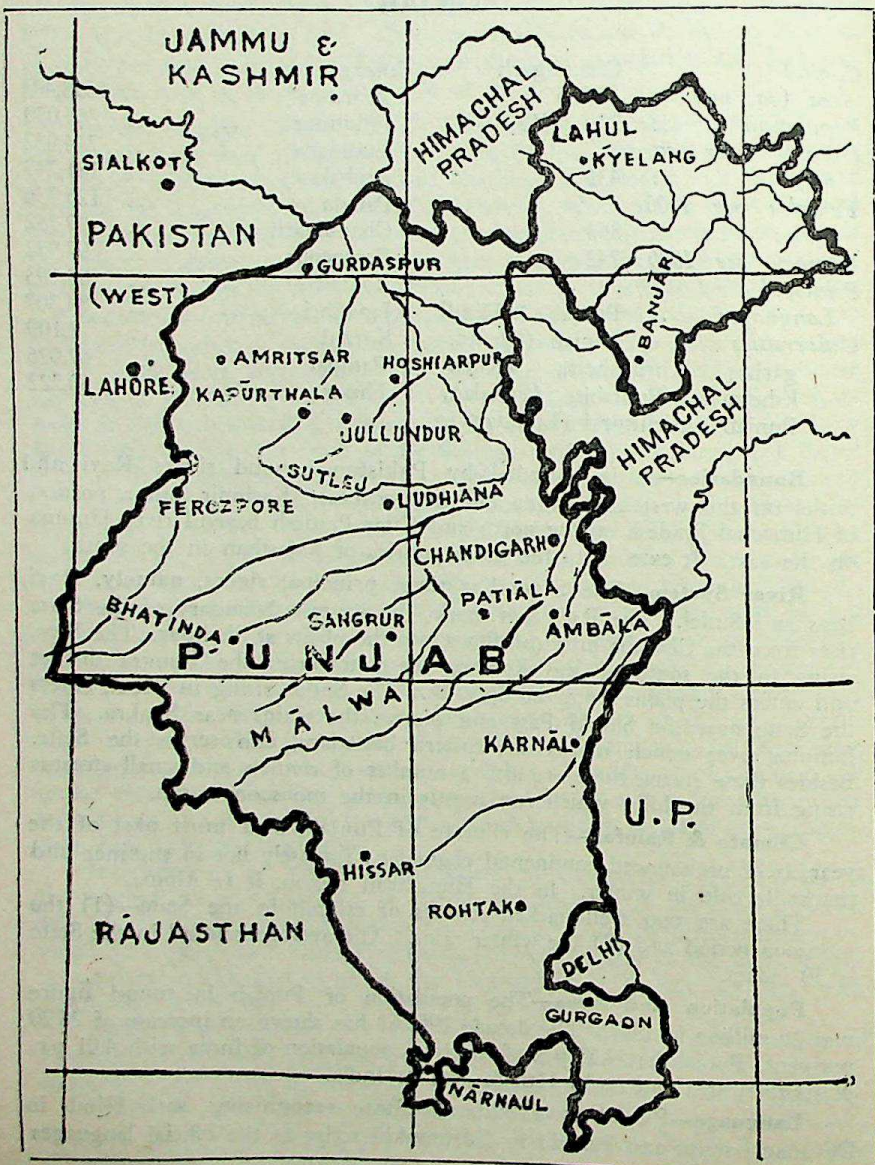
River System—The State has three principal rivers, namely, Ravi, Beas and Sutlej. The Ravi that marks the western boundary of the State rises from the Chamba hills and flows into the plains at Shahpur. The Beas, rising in the south of the Rohtang Pass, traverses the Kangra district and enters the plains from the Shivalik. The Sutlej, rising in Tibet, enters the State near the Shipki Pass and pierces the plains near Bhakra. The Jamuna river which marks the eastern boundary, also serves the State. Besides these rivers, there are also a number of rivulets and small streams rising from the hills, which run mostly in the monsoon season.

Climate & Rainfall—The climate of Punjab, over most part of the year, is of pronounced continental character; intensely hot in summer and markedly cold in winter. In the Himalayan region, it is Alpine.

There are two well-marked seasons of rainfall in the State—(1) the monsoon period and (2) the winter rains. The average rainfall in the State is 30 inches.

Population and Area—The population of Punjab in round figure was 20 million in 1961. The decade 1951-61 has shown an increase of 26.20 per cent. Punjab has 4.63 p.c. of the total population of India with 4.01 p.c. of its total area and ranks 11th in area in India.

Language—Punjab is a bilingual State recognising both Hindi in Devanagiri script and Punjabi in Gurumukhi script as the official languages of the State.



For more convenient transaction of the business of Government with regard to some special subjects, the State has been divided into two regions—namely, Hindi-speaking and Punjabi-speaking. For each of the regions, there is a Regional Committee of the State Assembly consisting of the legislators belonging to each region, including ministers from that region but not including the Chief Minister. The advice tendered by the Regional Committees in respect of specified subjects is normally accepted by the Government and the State Legislatures. In case of difference of opinion, however, reference is to be made to the Governor whose decision is final and binding. The Regional Committees are also empowered to make proposals with regard to "question of general policy not involving any financial commitments other than expenditure of a routine and incidental character."

The Hindi region of the Punjab embraces the districts of Kangra, Simla (this now includes Khandaghat also), Karnal, Rohtak, Gurgaon, Hissar, Mahendragarh, Lahaul and Spiti, Ambala (excluding Rupar and Kharar tehsils) and Jind and Narwana tehsils of Sangrur district.

The Punjabi region consists of the districts of Gurdaspur, Amritsar, Bhatinda, Jullundur, Hoshiarpur, Ferozepur, Ludhiana, Kapurthala, Patiala, Rupar and Kharar (excluding Chandigarh) tehsils of Ambala district, and Sangrur district (excluding Jind and Narwana tehsils). Chandigarh, the capital, however, does not form part of either of the two regions.

Agriculture—The main occupation of the people is no doubt agriculture; 66.5 p.c. of the people are engaged in it. In the matter of food production, Punjab, according to production figures of 1961-62, is the largest gram-producing area in the Union, second in wheat, sugarcane, rape-seed, mustard and cotton, third in maize, fifth in bajra, while it produces considerable quantities of *jawar*, rice, groundnut and small quantities of tea, tobacco, and linseed. The production of cotton in Punjab amounts to one-fifth of the total production of the country.

Punjab has been the first State to initiate on experimental basis, a scheme of *crop insurance* under which safeguards will be provided to the cultivators against unforeseen natural calamities.

Package Programme is one of the most important agricultural measures introduced on experimental basis. Its main aim has been to intensify pace of agricultural development as also to increase the income of individual farmers.

Forests—The forest area of the State is reckoned at 4,919 sq. miles, which constitutes only 10.5 p.c. of the total area as against the all-India figure of 22 p.c. Most of these forests are concentrated in the inaccessible Himalayan tracts.

Minerals—The State has very little mineral wealth. Iron ore, limestone and slate are the only principal minerals economically exploited at present in addition to clay and miscellaneous building materials. Most

of the mineral occurrences are located in the Kangra, Mahendragarh and Ambala districts.

Industries—There were 4,874 registered factories in the State in 1963 as against only 600 at the time of partition. Jullundur has become famous for sports goods, while Ludhiana and Batala are well-known for light engineering works and Amritsar for textile goods. Sonpet is well-known for its cycle factory, one of the largest of its kind in the country. The other large-scale industries include the woollen mill at Dhariwal, one new cotton spinning mill at Hissar and a paper mill at Jagadhri. The Goodyear Company have also set up a rubber tyre factory in the State at Ballabgarh in Gurgaon district. A number of big factories are also coming up at Chandigarh, most important among them are anti-biotic plant, meters and instruments factory, hosiery needles factory, cable factory, and Hindustan Machine Tools factory at Pinjore, near Chandigarh.

Construction of 5 industrial estates at Ludhiana, Nilokheri, Sonpet, Malerkotla, and Batala are now complete.

Regarding small-scale industries, the State holds an almost unique position in India. It has a large number of medium and small-scale industries which include scientific instruments, glassware, wooden planks and hooks, foundry and engineering, rerolling mills, cotton ginning, canning, and preservation of foods, etc.

Cottage Industries—Manufacture of blankets, 'kheses', rugs, cycle parts, utensils, and sewing machine parts, tanning and wood industries, silk spinning and weaving, potteries, shoe-making etc. are among the principal cottage industries of this State. In hosiery industry with 200 concerns, Punjab occupies the leading position in the whole country. In the production of artificial silk, Punjab ranks next only to Bombay.

Irrigation—After the partition, the best canal-irrigated areas were lost to West Punjab; vigorous efforts, therefore, had to be made to extend more and more irrigation facilities to fill the gap created by the partition. Besides the multipurpose Bhakra-Nangal and Harike Projects and minor irrigation programme, a large number of other schemes also came to be undertaken during the First and Second Five-Year Plans, such as remodelling of Western Jamuna Canal, construction of flood irrigation channels, the extension of irrigation on the Eastern Canal, Dadri Irrigation Scheme, Naraul Bund and Beas River Projects, etc.

Works on Beas project comprising Sutlej-Beas link. Gurgaon Canal Project, remodelling of Western Jamuna Canal Feeder Project, utilization of Sutlej waters released as a result of the construction of Sirhind Feeder, tube-wells and other minor irrigation schemes are making steady progress. Works on Bhakra Canals comprising 108 miles of canals and 3,160 miles of distributaries, the Madhopur Beas Project and the Sirhind Feeder Project have been completed.

Districts of Punjab—Ambala, Amritsar, Bhatinda, Ferozepur, Gurdaspur, Gurgaon, Hissar, Hoshiarpur, Jullundur, Kangra, Kapurthala, Karnal, Kulu, Lahaul & Spiti, Ludhiana, Mahendragarh, Patiala, Rohtak, Sangrur, Simla.

RAJASTHAN

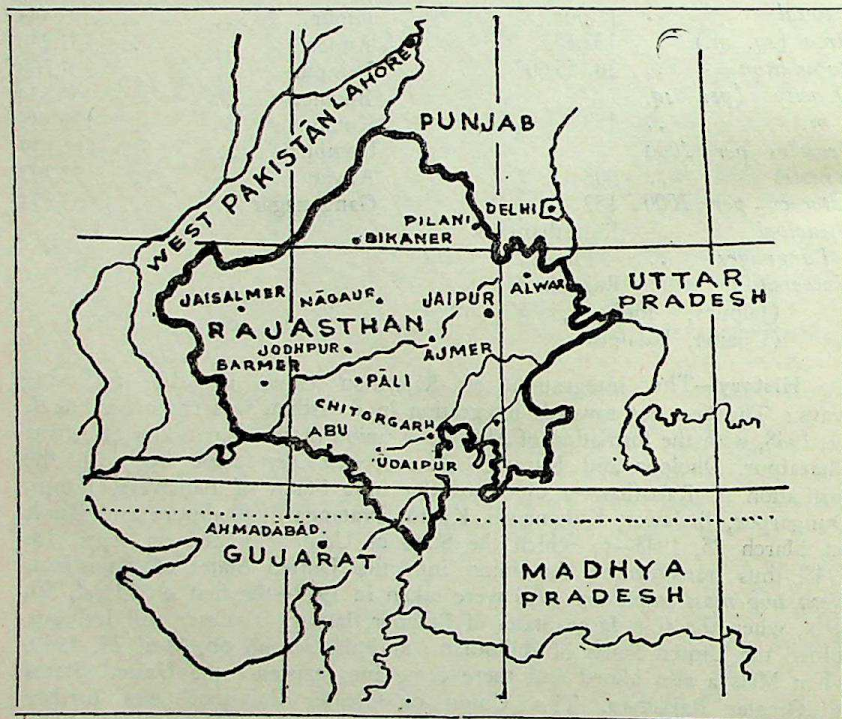
			<i>Cities :</i>	<i>Population</i>
<i>Capital</i>	..	Jaipur	Jaipur ..	403,444
<i>Area (sq. m.)</i>	..	132,152	Ajmer ..	231,240
<i>Population</i>	..	20,155,602	Jodhpur ..	224,760
<i>Density (per sq. m.)</i>	..	153	Bikaner ..	150,634
<i>Females per 1000 males</i>	..	908	Kotah ..	120,345
<i>Literacy per 1000</i>	..	152	Udaipur ..	111,139
<i>Principal Languages</i>	..	Rajasthani & Hindi	Alwar ..	72,707
<i>Universities</i>	..	Rajasthan (Jaipur), Jodhpur, Vikram (Ujjain), Udaipur.	Ganganagar ..	63,854

History—The integration of Rajasthan came in the following ways: The *first step* towards integration in Rajasthan was taken on March 17, 1948, with the formation of Matsya—a union of the four States of Alwar, Bharatpur, Dholpur and Karauli. The *second step* came up with the formation of Rajasthan—a union of the nine States of Banswara, Bundi, Dungarpur, Jhalawar, Kishengarh, Kotah, Pratapgarh, Shahpura and Tonk on March 25, 1948—to which the State of Udaipur joined on April 18, 1948, thus transforming the union into the United States of Rajasthan. *Next two most important steps* were taken in 1949—the first on March 30, 1949, when the four large States of Bikaner, Jaipur, Jaisalmer and Jodhpur joined the United States of Rajasthan; and the second on April 25, 1949, when Matsya also joined and there came into existence the United States of Greater Rajasthan. This Union of Greater Rajasthan was further enlarged by the accession to it of the States of Sirohi on January 25, 1950. The State of Rajasthan thus consisted of 19 old princely States from January 25, 1950 to October 31, 1956. The *final step* was taken on November 1, 1956, when the State of Ajmer, the tehsil of Abu and the Sunel Tuppa area were integrated with Rajasthan. Thus Rajasthan came into being, with its status raised from that of a Part-B State to a full-fledged constituent State of the Indian Union.

Boundaries—Surrounded by Pakistan on the west and north-west, this State has Punjab, U.P. and Madhya Pradesh to its east and north-east, and Maharashtra to its south-west.

Climate & Rainfall—The State has a scanty rainfall, its most striking feature being extreme variation and unequal distribution. The discovery of subsoil water in the Luni river in the near-desert zone, promises to change the face of the earth in that region.

Population and Area—The population of the State in round figure was 20 million in 1961. The decade 1951-61 has shown an increase of 26.20 per cent. The percentage of India's population in Rajasthan is



4.60 and it occupies 11.22 p.c. of India's total area. It ranks 2nd in area and 11th in population among the States.

Agriculture—*Jawar, bajra, wheat, maize, barley and gram* are the principal crops; certain amounts of *cotton, sesamum, groundnut and rice* being also grown.

Minerals—The State is rich in mineral resources. Two of Rajasthan's rich deposits are high-class *limestone* and *gypsum*. The limestone is spread all over the State. Gypsum is one of the biggest gifts of nature to Rajasthan. In Jamsar and Lunkarsar, gypsum is obtained in large quantities

and in the purest form. One of the important ores available in Rajasthan is *abrythorium sulphate* which is not found anywhere in India. Except in Salun district, large resources of sodium sulphate and salt occur at Didwana and Sambhar. Of Rajasthan's valuable ores, the most important is mica which with Bihar, it supplies to the outside world. Deposits of lignite occur in the Palan region of Bikaner.

Industries—The most important industries are the weaving of muslin, dying and printing of cotton cloths, manufacture of carpets, rugs and other woollen goods, enamelling, pottery, ivory work, *gota kinari* (silver and gold laces), lacquer, wooden toys, hand-made paper, papier-mache toys, embroidered shoes. Jaipur is famous for enamelling work.

Two new major industries are the spinning mills at Udaipur and a nylon factory at Kotah. Construction works on the textile mills at Kishengarh, Bhilwara and Bhawanimandi are in progress. Two fertilizer factories are being set up at Kotah to meet the increasing demand for fertilizers in the State. A cement factory at Chittorgarh would be commissioned in 1966, and another factory at Dabok area in Udaipur district would also be set up soon.

Irrigation—There are two multipurpose projects in Rajasthan, namely, *Bhakra* and *Chambal*. The work in Rajasthan relating to the Bhakra-Nangal Project comprised of distribution channels and connected masonry works, i.e., project building etc. The work in progress in Rajasthan under the Chambal Project are Kotah Barrage, Right Main Canal, Left Main Canal and their distribution system. Most of the works on Kotah Barrage, Right Main Canal and Left Main Canal has been completed. All the remaining works will be completed shortly.

Rajasthan Canal first began to release its waters in October 1951 at the tail of the Rajasthan Feeder, about 30 miles from Hanuman Garh in Rajasthan. Rajasthan Canal will be 425 miles long and will cost about Rs. 200 crores. 110 miles of the canal will be in the Punjab and the rest in Rajasthan. It is expected to produce 2.5 million tons of foodgrains and other agricultural products annually. In order to provide perpetual supplies of water for the Rajasthan Canal from the Beas and Ravi rivers, the *Beas Project* has been taken up. Work on the project started in 1960-61 and is expected to be finished by 1971-72.

Districts of Rajasthan—Ajmer, Alwar, Banswara, Barmer, Bharatpur, Bhilwara, Bikaner, Bundi, Chittorgarh, Churu, Dungarpur, Ganganagar, Jaipur, Jaisalmer, Jalore, Jhalawar, Jhunjhunu, Jodhpur, Kotah, Nagaur, Pali, Sawai Madhopur, Sikar, Sirohi, Tonk, Udaipur.

UTTAR PRADESH

<i>Capital</i>	.. Lucknow	<i>Cities :</i>	<i>Population</i>
<i>Area (sq. m.)</i>	.. 113,654	Kanpur ..	.. 971,962
<i>Population</i>	.. 73,746,401	Lucknow ..	.. 655,673
<i>Density (per sq. m.)</i>	.. 649	Agra ..	.. 508,680
<i>Literacy per 1000</i>	176	Varanasi ..	.. 489,864
<i>Females per 1000 males</i>	.. 909	Allahabad ..	.. 430,730
<i>Principal Language</i>	Hindi	Meerut ..	.. 282,997
		Bareilly ..	.. 272,808
		Moradabad ..	.. 191,828
		Saharanpur ..	.. 185,213
		Aligarh ..	.. 185,020
		Gorakhpur ..	.. 180,255
<i>Universities :</i>		Jhansi ..	.. 169,712
Lucknow, Allahabad, Agra, Aligarh,		Dehra Dun ..	.. 156,341
Varanaseya Sanskrit, Gorakhpur,		Rampur ..	.. 135,407
Roorkee, Banaras Hindu (Varanasi), U.P. Agricultural (Pant Nagar, Nainital).		Mathura ..	.. 125,258
		Shahjahanpur ..	.. 117,702
		Mirzapur ..	.. 100,097

Boundaries—Uttar Pradesh is a frontier State along the foothills of the Himalayas, having common borders with Tibet and Nepal in the north, and is bounded by Bihar on the east, Himachal Pradesh, Punjab and Rajasthan on the west, and Madhya Pradesh on the south.

Climate & Rainfall—With a dry and extreme climate, rainfall in the State averages below 40 inches. The deficiency, however, is partly made up by the Ganges, the Jamuna and their canals making the basic occupation, agriculture, more or less profitable. Uttar Pradesh is one of the best-watered States in India. The climate on the whole is cooler and drier than that of West Bengal, though in hot weather, the heat is fiercer in the plains. Uttar Pradesh is only just within monsoon region and rainfall consequently is not so heavy as it is in further east.

Population and Area—The population in round figure was 74 million in 1961. It is the most populous State in India. The decade 1951-61 has shown an increase of 16.66 p.c. Its population is 16.81 p.c. of the total population of India. With 9.65 p.c. of the total area of India, it ranks 4th in area.

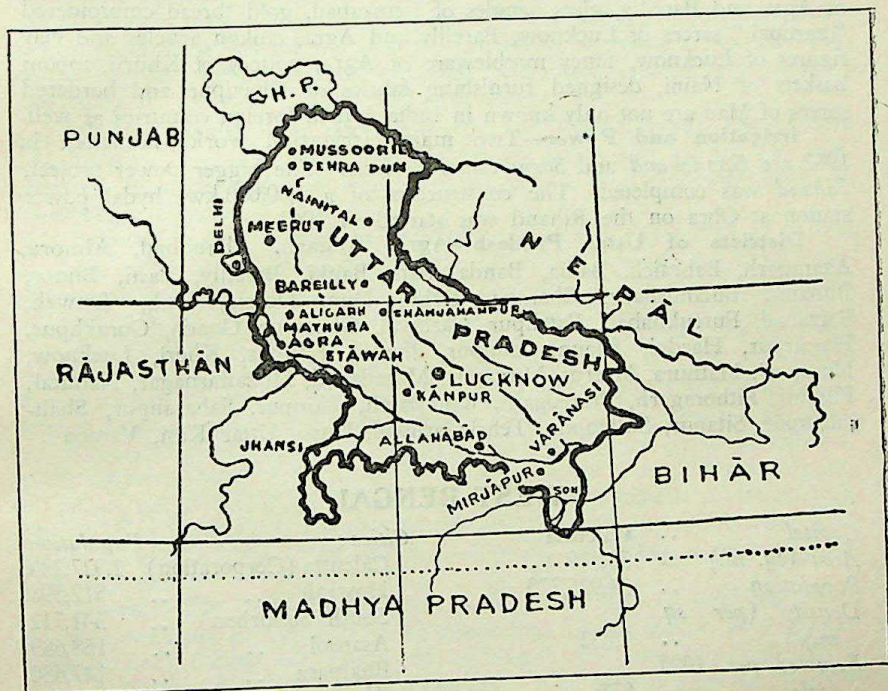
Agriculture—The State it stands first in its area under wheat, maize, barley, gram, sugarcane and sesamum ; second in *bajra*, linseed, rape and mustard ; besides producing considerable amounts of rice, *jawar* and small quantities of *ragi*, cotton, groundnut, tea and tobacco. It is the only opium-producing State in the Union.

Forests—The State's forest areas as yet amount to about 13 p.c. of the total area and are situated mainly at the foot of the Himalayas.

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Minerals—Its mineral resources too have not been known to be very considerable; deposits of copper, slate, glass-sand, sandstone and steatite being alone located.

Industries—So far industry is concerned, Uttar Pradesh is indeed one of the new industrially advanced territories with some modern and



large-scale and many old cottage industries. It is particularly noted, however, for producing about 60 per cent of the total sugar in India and a large amount of leather and footwear, cotton and woollen textiles, paper and chemicals among other things. In the public sector, there are the following factories—*Government Cement Factory* at Churk and *Government Precision Instrument Factory*. The Central Projects are—*Heavy Electrical Plant* at Ranipur (Saharanpur district), *Nitrogenous Fertilizer Factory* at Gorakhpur and *Diesel Locomotive Factory* at Rishikesh. In private sectors, the following industries are coming up—a camphor factory at Bareilly, an automobile tyre factory at Allahabad, and a newsprint factory at Moradabad.

Cottage Industries—The cottage industries in U.P. occupy an important place in the economic life of its people. All types and varieties of handicrafts or cottage industries exist and produce an immense range of articles, both necessities and luxury. Fabulous brocade and tissue of Banaras, carpets of Mirzapur, prints of Lucknow and Furrukhabad, ornamental brassware of Moradabad and Banaras, carved woodware of Saharanpur, durries of Agra and Bareilly, glass bangles of Ferozabad, gold thread embroidered "zardozi" sarees of Lucknow, Bareilly and Agra, chikon articles and clay figures of Lucknow, fancy marbeware of Agra, pottery of Khurji, moonj baskets of Naini, designed furnishing fabrics of Ghazipur and bordered sarees of Mau are not only known in India, but in foreign countries as well.

Irrigation and Power—Two major irrigation works launched in 1962 are *Gandakand* and *Sarju Canal Projects*. The bigger power project, *Rihand* was completed. The construction of a 1,00,000-kw. hydal power station at Obra on the Rihand was started in 1962.

Districts of Uttar Pradesh—Agra, Aligarh, Allahabad, Almora, Azamgarh, Bahraich, Ballia, Banda, Bara Banki, Bareilly, Basti, Bijnor, Budaun, Bulandshahr, Chamoli, Dehra Dun, Deoria, Etah, Etawah, Faizabad, Furrukhabad, Fatehpur, Garhwal, Ghazipur, Gonda, Gorakhpur, Hamirpur, Hardoi, Jalaun, Jaunpur, Jhansi, Kanpur, Kheri, Lucknow, Mainpuri, Mathura, Meerut, Mirzapur, Moradabad, Muzaffarnagar, Nainital, Pilibhit, Pithoragarh, Pratapgarh, Rai Bareli, Rampur, Saharanpur, Shahjahanpur, Sitapur, Sultanpur, Tehri-Garhwal, Unao, Uttar Kasi, Varanasi.

WEST BENGAL

		<i>Cities :</i>	<i>Population</i>
<i>Capital</i>	.. Calcutta	Calcutta (Corporation)	2,927,289
<i>Area (sq. m.)</i>	.. 33,829	Howrah ..	512,598
<i>Population</i>	.. 34,926,279	South Suburban ..	341,712
<i>Density (per sq. m.)</i>	.. 1,032	Asansol ..	168,689
<i>Females per 1000 males</i>	.. 878	Bhatpara ..	147,630
<i>Literacy per 1000</i>	293	Kharagpur ..	147,253
<i>Principal Language</i>	Bengali	Bally ..	130,896
<i>Universities</i>	Calcutta, Visva-Bharati (Santiniketan, Birbhum), Jadavpur (Calcutta), Burdwan, Kalyani, North Bengal (Siliguri), Rabindra Bharati (Calcutta).	Kamarhati ..	125,457
		S. Dum Dum ..	111,284
		Burdwan ..	108,224
		Baranagore ..	107,837
		Panihati ..	93,749
		Serampore ..	91,521

Boundaries—The State is bounded on the east by East Pakistan and Assam, on the south by the Bay of Bengal, on the west by Bihar and Orissa, and on the north by Nepal and Bhutan.

Physical Features—In its physical characteristics, West Bengal is a level expanse intersected by numerous rivers. Except for the mountains in Darjeeling district and the Sinchula hills of Jalpaiguri, there is hardly any undulation in this densely populated alluvial plain.

River System—Bhagirathi is the only channel left to West Bengal, which receives waters from the Ganges. The channel is of vital importance not only to West Bengal but also to the whole of India, as on its bank stands Calcutta, the largest port of India. The chief rivers of West Bengal are *Hooghly*, *Damodar*, *Rupnarain*, and *Tista*.

Climate—Moist wind from the Bay of Bengal make the climate of the State highly humid, specially in the rainy season; but in cold weather, from September to February, the climate over the entire State is exceedingly pleasant.

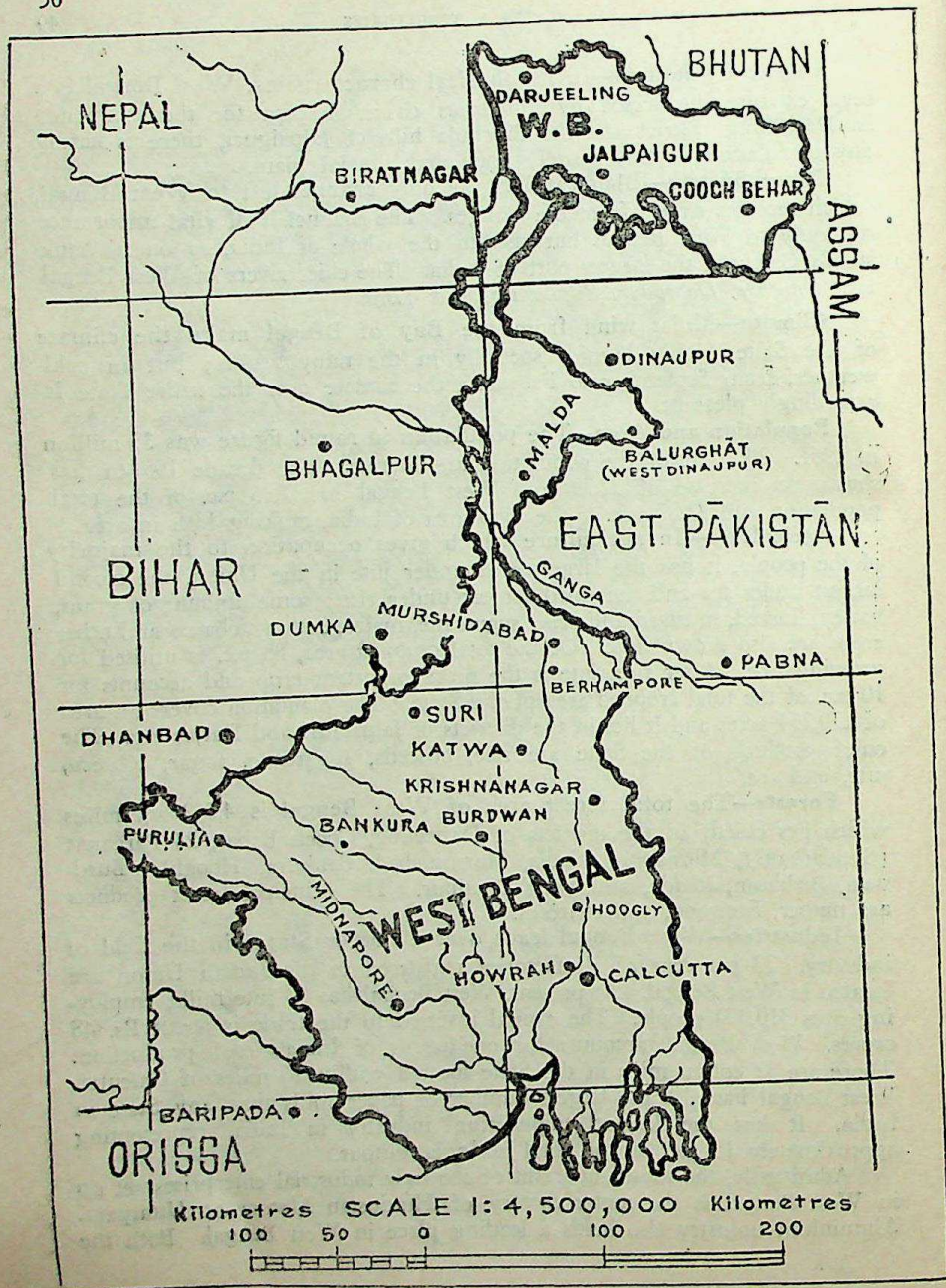
Population and Area—The population in round figure was 35 million in 1961. 29.3 p.c. of the population are literate. The decade 1951-61 has shown an increase of 32.79 p.c. West Bengal has 7.96 p.c. of the total population and 22.87 p.c. of the total area of India, ranking 13th in area.

Agriculture—In agriculture which gives occupation to the majority of the people, it has the largest area under jute in the Union, the second largest under tea and the third largest under rice; some amount of gram, barley, linseed, mustard and rape, sugarcane, maize, cotton, tobacco and other crops are also grown here. Of the total cropped area, 88 p.c. is utilised for growing rice. After rice, jute is the most important crop and accounts for 10 p.c. of the total cropped area of the State. The plantation covers an area of 170,264 acres and it lies in the districts of Jalpaiguri and Darjeeling. The chief products of the State are rice, oilseeds, sugarcane, sugar, tobacco, jute, and tea.

Forests—The total forest area of West Bengal is 4,562 sq. miles, which lies chiefly in the districts of Darjeeling, Cooch Behar, 24 Parganas (Sundarbans), Midnapore, Nadia, Murshidabad, Bankura, Hooghly, Burdwan, Birbhum, Malda, and West Dinajpur. The principal forest products are timber, firewood, and charcoal.

Industries—West Bengal leads over all other States in the field of industry. 23 per cent of all factories registered in the Indian Union are located in West Bengal. At present, West Bengal has 90 jute mills, employing over 310,000 people. The capital invested in the trade is about Rs. 48 crores. West Bengal accounts for one-fourth of India's coal production. There are 32 cotton mills in the State located within 16 miles of Calcutta. West Bengal has also the largest number of paper mills than any State in India. It has the largest engineering industry in India, representing approximately 15 p.c. of the total all-India output.

Admittedly, the most important of the new industrial enterprises set up in West Bengal is the motor factory of Hindustan Motors at Uttarpara. Aluminium industry also holds a leading place in West Bengal. Both the



rolling mills of the country are located in this State—Indian Aluminium Company's works at Belur and the Aluminium Corporation's plant in Jaykaynagar near Asansol. With the transfer of Purulia district and a portion of Purnea from Bihar, West Bengal gains lac-processing centres at Jhalda and Balarampur, the monopoly of *tassar* silk around Raghunathpur and jute-fields in Purnea. The two of the big steel plants in India—one at Durgapur in the public sector and the other at Burnpur near Asansol in the private sector—are located in West Bengal. With numerous industrial projects, Durgapur has become Ruhr of India.

Cottage Industries—West Bengal's cottage industry is also considerable, the most important of which is cotton handloom industry. This industry provides employment to the highest number of people in West Bengal. Next in importance is silk industry. Other notable industries of West Bengal are leather industries, brass and bell-metal industries, ferrous industries, agricultural implements and cutlery, ceramic industries, oil and soap industries, wood-working, fibre industry, fire-making, etc.

River Valley Projects—West Bengal has two principal river valley projects. The first is *Mayurakshi Reservoir Project* which was started in 1948. The river Mayurakshi originates from the uplands of the Santhal Parganas in Bihar and falls into the Bhagirathi after a course of 150 miles. At Massanjore in the Santhal Parganas, the river flows through a narrow valley. The turbulent Mayurakshi sprawling over an area of 1,400 sq. miles through the districts of Birbhum, Murshidabad, Burdwan and Santhal Parganas, is controlled by a dam at Massanjore. The waters released by the completed project flow through 900 miles of canals and are expected to irrigate 560,000 acres from June to October and 50,000 acres from November to May. This will convert a single-crop area of poor yield into a double-crop area of higher yield. Generating plant has been installed for the generation of 4,000 kw. of electric power.

Kangsabati Reservoir Project in Midnapur-Bankura districts is a Second-Plan project and has made considerable progress. The scheme consists of the construction of two major dams, each of the size of the Maithon Dam of the D. V. C. complementary to each other. The reservoir created by the two dams will ultimately be connected together and the surplus discharge will be passed through a common spillway to be constructed by cutting a saddle in the hills on the left bank.

Another principal river valley project is the *Damodar Valley Project* undertaken jointly by West Bengal and Bihar with the help of the Central Government. This is a multi-purpose project which comprises eight storage chains with hydro-electric stations, two auxiliary plants with an installed capacity of 240,000 kw. and an additional thermal power station at Bokaro with an installed capacity of 200,000 kw. The only medium irrigation scheme is the *Karatowa Talma Irrigation Scheme* in Jalpaiguri district,

estimated to cost Rs. 46.38 lakhs. Another medium irrigation scheme, *Saharajore Irrigation Scheme* in Purulia is in progress.

Power Generation—Establishment of a super thermal power station at Bandel in Hooghly district, which will ultimately generate 313 mw. of electricity, has been undertaken by the Government. Certain new power schemes have also been included.

Scheduled Tribes—In West Bengal, after the reorganisation of States, there are as many as 41 tribes with a total population of 2,063,883, such as Santhals, Oraons, Mundas, Koras, Hos, Bhumijis, Bhutias, Chakmas, Hajangs, Lepchas, Asurs, Baigas, Paharis, etc. These people are distributed over different districts in varying numbers, the highest concentrations being in Purulia. Midnapur and Jalpaiguri are second and third respectively on the list. Then follow Bankura and Burdwan. The dominant tribe is, of course, the Santhal, followed by the Oraon and the Munda.

Districts of West Bengal—Bankura, Birbhum, Burdwan, Calcutta, Cooch Behar, Darjeeling, Hooghly, Howrah, Jalpaiguri, Malda, Midnapore, Murshidabad, Nadia, Purulia, 24 Parganas, West Dinajpur.

NORTH-EAST FRONTIER AGENCY

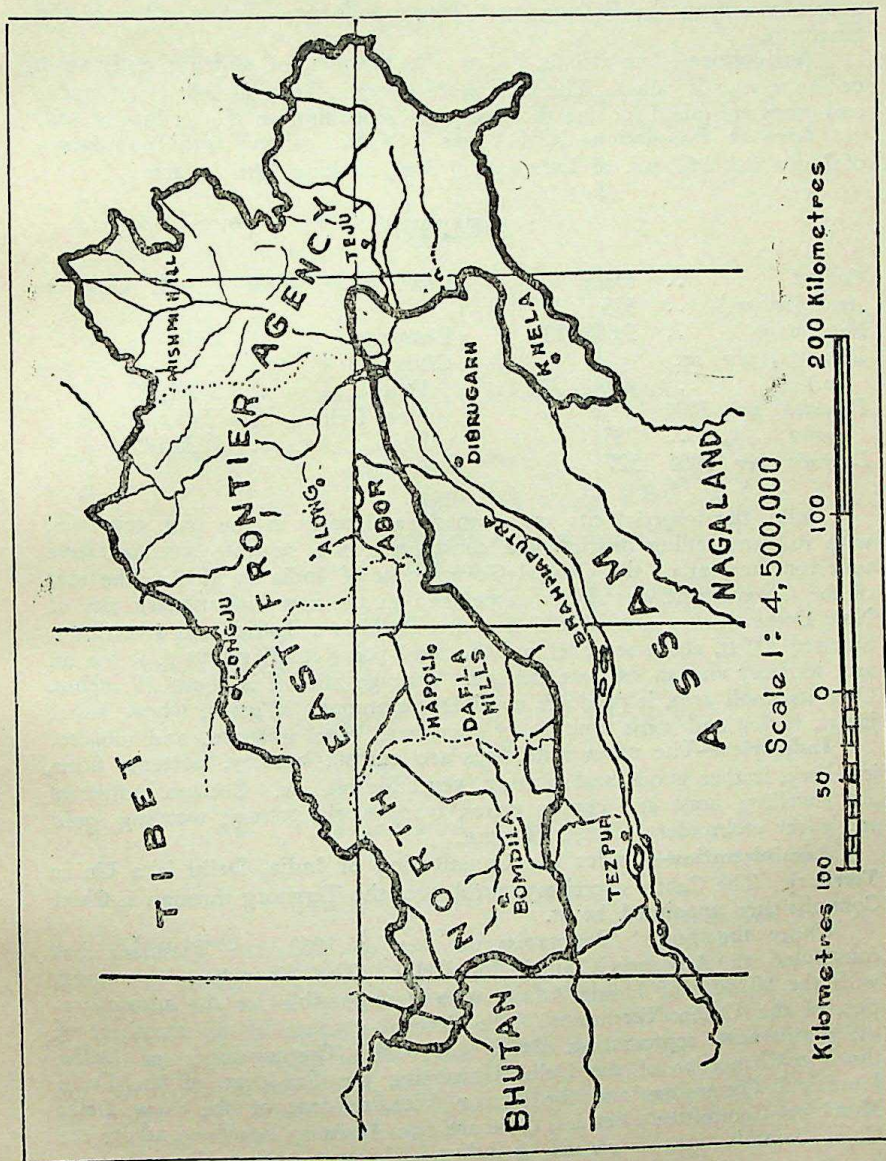
<i>Headquarters</i>	.. Shillong	<i>Density (per sq. m.)</i>	.. 11
<i>Area (sq. m.)</i>	.. 31,438		
<i>Population</i>	.. 336,558	<i>Literacy per 1000</i>	.. 72

Boundaries—NEFA is a wild mountainous tract along the eastern Himalayas. It is bound by Bhutan on the west, Tibet and China on the north and Assam on the south.

New Administrative Set-up—It was announced on July 15, 1965 that (1) NEFA, hitherto administered through the Ministry of External Affairs, has been brought under the Home Ministry with a view to 'normalizing certain anomalies'; (2) the various divisions of NEFA would henceforth be known as 'districts' and the Political Officers administering the region as Deputy Commissioners; (3) the separate Frontier Administrative Service would continue; (4) there would also be no change in the position of the Adviser to the Governor of Assam who administers the NEFA region on behalf of the Central Government.

The five administrative districts of NEFA are: (1) Kameng, (2) Subansiri, (3) Siang, (4) Lohit and (5) Tirap, with their headquarters at Bomdi La, Zero, Along, Tezu and Khonsa respectively. Tuensang which formed part of Tirap, was included in the Naga Hills district in 1957.

People—There are about 40 tribal groups of Indo-Mongoloid origin and as many as 50 dialects are spoken in NEFA. Among the different tribes, the better known are the Monpas, Sherdukpens, Dafflas, Hill Mikirs, Adis, Membas, Mishmis, Noctes, and Wanchos. The people lead a corporate life. Society is patrelenial, polygamy is common and there are traces of



poliandry among the Gallongs and Tibetan-influenced border tribes of the far north.

Agriculture—The tribals follow the practice of shifting cultivation or *Jhum* as it is called. The forests are cleared, the trees felled and burnt and crops are raised for one to three years depending on the fertility of soil.

Area & Population—NEFA has 0.08 p.c. of the total population of India and 2.67 p.c. of India's total area, ranking 14th in area.

DELHI

<i>Capital</i>	..	Delhi	<i>Principal Languages</i>	Hindi, Urdu & Punjabi
<i>Area (sq. m.)</i>	..	573		
<i>Population</i>	..	2,658,612	<i>University</i>	.. Delhi
<i>Density (per sq. m.)</i>	..	640	<i>Cities :</i>	
<i>Females per 1000 males</i>	..	785	Delhi	.. 2,061,787
<i>Literacy per 1000</i>	527		New Delhi	.. 2,61,545
			Delhi Cantt.	.. 36,105

Delhi, the imperial city under many a dynasty in the past centuries, with its surrounding districts was constituted as a separate administrative unit for the seat of the Central Government of India in 1912. The seat of the Government was shifted since then to the new and modern city of New Delhi nearby. New Delhi is a city, Delhi is a district and a territory. Situated 700 ft. above sea-level and the focal point of all railways, it has an arid territory and an extreme climate. Average rainfall is about 25 inches. Over its small area, it produces considerable amount of gram, wheat, bajra, jawar, barley and some amount of sugarcane, rape, mustard, and tobacco.

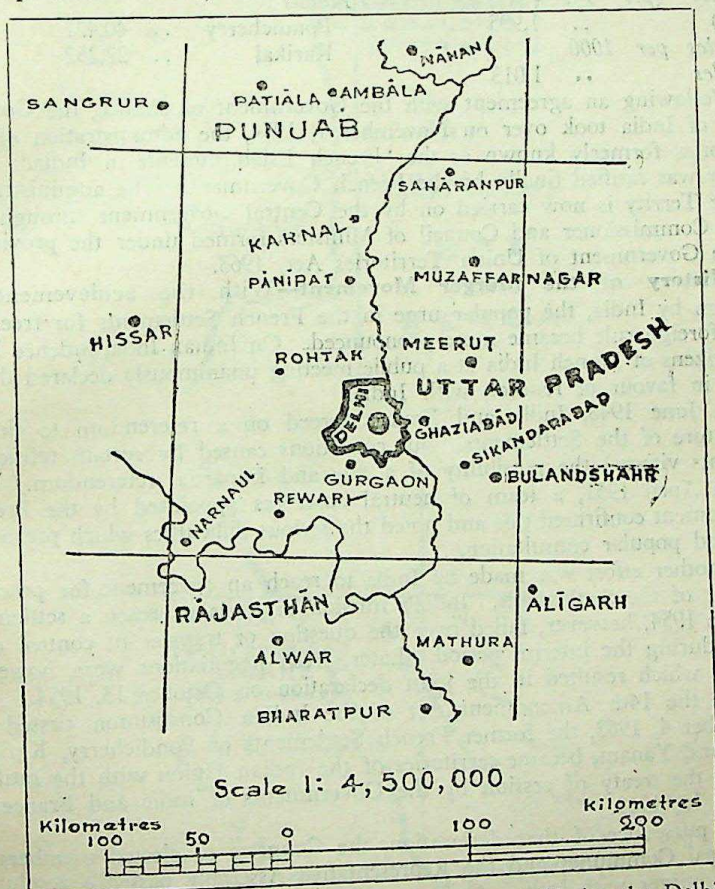
Industries—The main industries are cotton, hosiery, pottery, flour, jewellery, leather goods and tanning, vegetable oil, etc. Cottage industries are jewellery, brass and copper wares, ivory work, pottery, weaving, gold and silver embroidery, famed of yore.

Administration—Under the Constitution of India, Delhi is a Union Territory. The Centre exercises control over the Territory through a Chief Commissioner appointed by it.

Under the States' Reorganisation Act of 1960, the President has constituted an Advisory Council for Delhi. The Council is associated with the Minister of Home Affairs who is responsible for the administration of the Union Territories. The Council consists of all members of the Parliament representing Delhi, the Chief Commissioner of Delhi, the Vice-Chancellor of the Delhi University, the President of the Delhi Municipal Committee and the Senior Vice-President of the New Delhi Municipal Committee. Besides, there are two Advisory Boards to advise the Chief Commissioner in regard to industrial matters and public relations.

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The Delhi Municipal Act, 1957 was passed by Parliament on December 17, 1957 as part of the implementation of the scheme for the reorganisation of States. This Act establishes a municipal corporation for Delhi (excluding cantonment area) and some parts of New Delhi (including the Diplomatic Enclave) and provides for a unified and integrated civil



administration of the urban as well as rural areas. Under the Delhi Development Act, also passed in 1957, the Delhi Development Authority will carry on the civil survey of, and prepare a master plan for Delhi and shall promote and secure the development of Delhi according to the plan.

Area and Population—Delhi has 6.61 p.c. of the total population of India and 0.05 p.c. of India's total area, ranking 22nd in area.

PONDICHERRY

<i>Capital</i>	..	Pondicherry	<i>Literacy per 1000</i>	374
<i>Area (sq. m.)</i>	..	185	<i>Principal Languages</i>	French & Tamil
<i>Population</i>	..	3,69,079		
<i>Density (per sq. m.)</i>	..	1,995	<i>Towns :</i>	
<i>Females per 1000 males</i>	..	1,013	Pondicherry	.. 40,421
			Karikal	.. 22,252

Following an agreement with the Government of France, the Government of India took over on November 1, 1954, the administration of the territories formerly known as the 'French Establishments in India.' This Treaty was ratified finally by the French Government. The administration of the Territory is now carried on by the Central Government through the Chief Commissioner and Council of Ministers formed under the provisions of the Government of Union Territories Act, 1963.

History of the Merger Movement—With the achievement of freedom by India, the popular urge in the French Settlements for freedom from foreign rule became more pronounced. On Indian Independence Day, the citizens of French India at a public meeting unanimously declared themselves in favour of reunion with India.

In June 1948, India and France agreed on a referendum to decide the future of the Settlements. But conditions caused by certain refractory elements vitiated the possibility of a fair and impartial referendum.

In April 1951, a team of neutral observers appointed by the French Government confirmed this and noted the serious difficulties which prevented free and popular consultation.

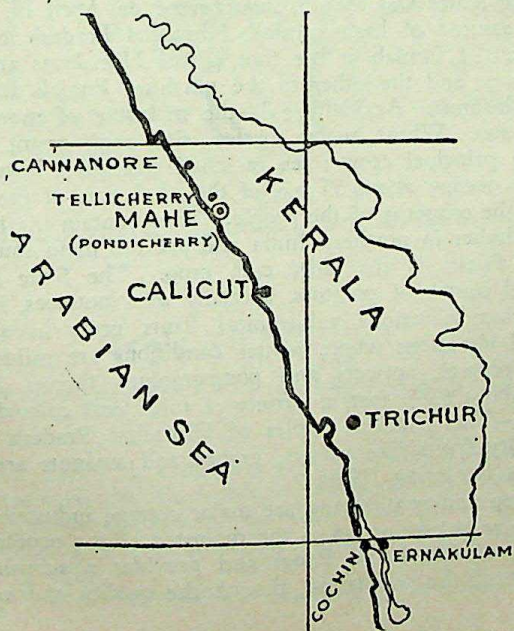
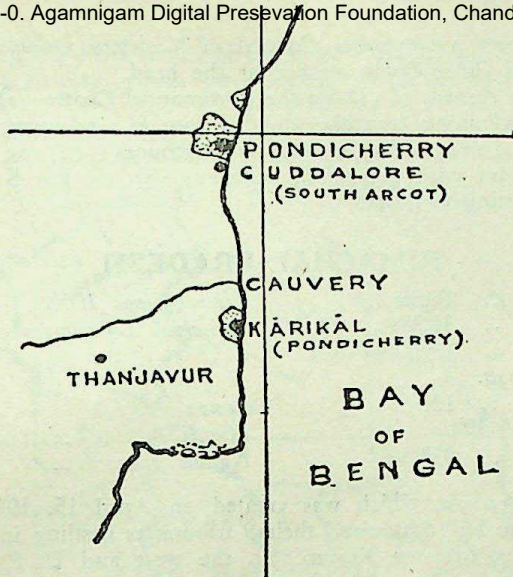
Another effort was made by India to reach an agreement for peaceful transfer of the Settlements. India's mission to Paris to reach a settlement in June 1954, however, failed over the question of transfer of control over police during the interim period. Later, fresh negotiations were, however, started, which resulted in the joint declaration on October 13, 1954.

By the 14th Amendment Act of the Indian Constitution passed on September 4, 1962, the former French Settlements of Pondicherry, Karikal, Mahe and Yanam, became territories of the Indian Union with the ratification of the treaty of cession by the Governments of India and France on August 16, 1962.

In pursuance of that declaration, the Congress of elected members of Municipal Communes and the Representative Assembly passed a resolution of the merger with India. On November 1, 1954, the *de facto* transfer of the French Settlements to the Indian Union came into force. The French National Assembly ratified on July 12, 1962, the Franco-Indian treaty of 1956, handing over the former French colonies of Pondicherry, Karikal, Mahe and Yanam.

Under the provisions of the Government of Union Territories Act of

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1963, there is now a 6-member Council of Ministers, including the Chief Minister, with a Chief Commissioner at the head.

Pondicherry consists of (1) on the Coromondel Coast—(a) *Pondicherry*, together with adjoining territory, divided into 8 communes, (b) *Karikal* and dependent districts, divided into 6 communes; (2) on the Andhra Coast—(a) *Yanam* with dependent villages; (3) on the Kerala Coast—*Mahe* and adjoining territory.

HIMACHAL PRADESH

<i>Capital</i>	..	Simla	<i>Literacy per 1000</i>	..	171
<i>Area (sq. m.)</i>	..	10,885	<i>Principal Languages</i>	Hindi and	
<i>Population</i>	..	1,351,144		Pahari	
<i>Density (per sq. m.)</i>	..	124	<i>Towns:</i>		
<i>Females per 1000 males</i>	..	928	<i>Mandi</i>	..	13,034
			<i>Nahan</i>	..	12,439

Himachal Pradesh, which was created on April 15, 1948, comprises 22 former Punjab Hill States and their 9 tributaries nestling in the foothills of the Himalayas, between Kashmir in the west and U. P. in the east. Bilaspur was merged into this Territory on July 1, 1954. The biggest of the merging States was Mandi, inaugurated on April 15, 1948. Heavily wooded and assured of high rainfall, Himachal Pradesh has two blocks, one to the west of Punjab at the foot of the Himalayas and bounded by U.P. on the west and the other to the north of Punjab and bounded by Jammu and Kashmir. Agriculture is the mainstay of more than 94 p.c. of the population. Wheat, maize, barley, rice, ragi, gram, sugarcane and potato are the principal crops; tea in small quantities being also grown. Forests, which occupy about 35 p.c. of the total area of the Pradesh, play a vital role in the economy of the people. They contain the largest quantity of coniferous timber in northern India and are the main source of revenue in the State. Potato is the chief cash crop. The State has established itself as a vital source of potatoes, specially seed potatoes, in India.

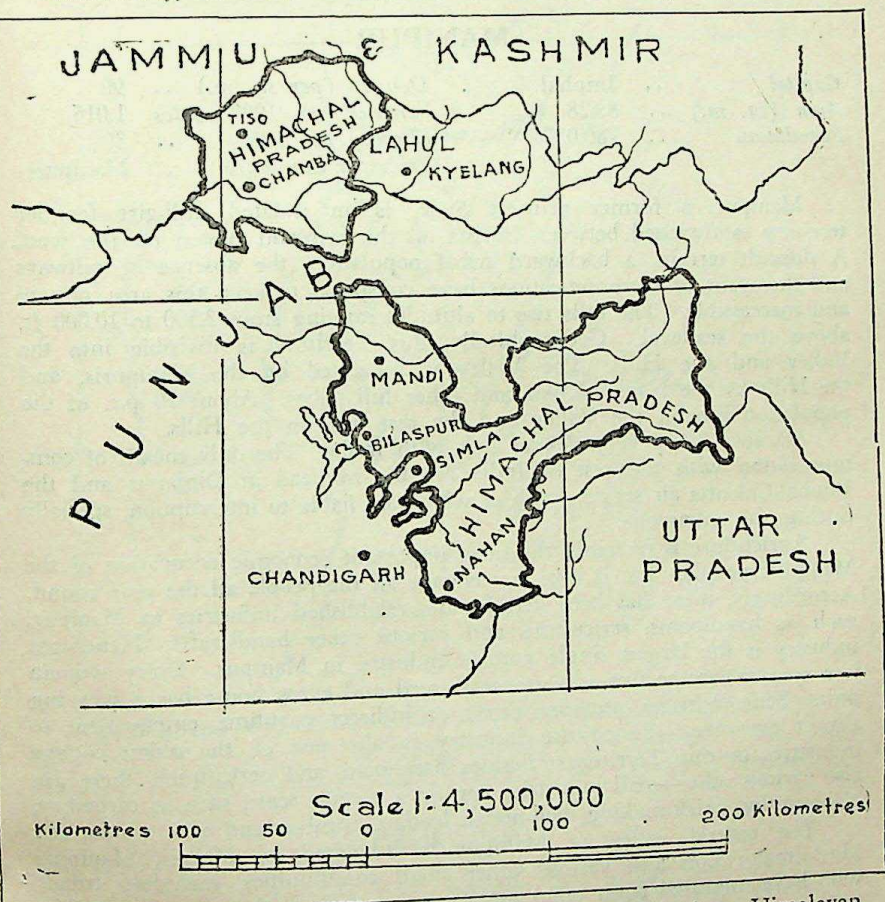
In the lower elevations, sub-tropical fruits grow in abundance and in the mid-hill elevations where winter conditions are milder, stone fruits like peaches, plumes, apricots and pomegranates thrive. In the higher elevations of about 6,000 feet, a variety of juicy and colourful apples and cherries grow. The delicious apples of Himachal Pradesh is famous all over India. Dry fruits like raisins, grapes and walnuts are cultivated in the Chini area bordering Tibet.

Cattle, sheep and goat-rearing are major cottage industries in Himachal Pradesh. The wool production is the mainstay of the people living in the higher regions of Chini and Pangti and provides a subsidiary source of income to most of the population, though the quality of wool is inferior.

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Mandi town is the chief centre of commerce for Ladakh and Yarkhand areas and also a halting station for passenger traffic between Pathankote and Kulu.

Historically, Himachal Pradesh States were founded by Rajput immi-



grants in the 14th and 15th centuries, who had sought these Himalayan retreats to preserve their cultural freedom. Their cultural tradition brought from Rajasthan, greatly contributed to the creation of Kangra School of Art, which marked a special phase of Indian painting that flourished between 1750 and 1850.

It is now governed under the provisions of the Government of Union

Territories Act, 1963, through a Council of Ministers with a Chief Minister and two Ministers. At the head there is a Lt. Governor.

Districts of Himachal Pradesh—Bilaspur, Chamba, Kinnaur, Mahasu, Mandi, Sirmur.

MANIPUR

<i>Capital</i>	.. Imphal	<i>Density (per sq. m.)</i>	.. 90
<i>Area (sq. m.)</i>	.. 8,628	<i>Females per 1000 males</i>	1,015
<i>Population</i>	.. 780,037	<i>Literacy per 1000</i>	.. 304
		<i>Principal Language</i>	.. Manipuri

Manipur, a former princely State, is an isolated, hill-girt frontier territory sandwiched between Burma on the east and Assam on the west. A difficult terrain, a backward tribal population, the absence of railways and the want of communications have conspired to keep this area remote and inaccessible. The hills rise to altitudes ranging from 2,500 to 10,000 ft. above the sea-level. Geographically, this Territory is divisible into the Valley and the Hills. The Valley is inhabited by the Manipuris, and the Hills by the Nagas, Kukis and other hill tribes. About 70 p.c. of the population inhabit the Valley and the rest live on the Hills.

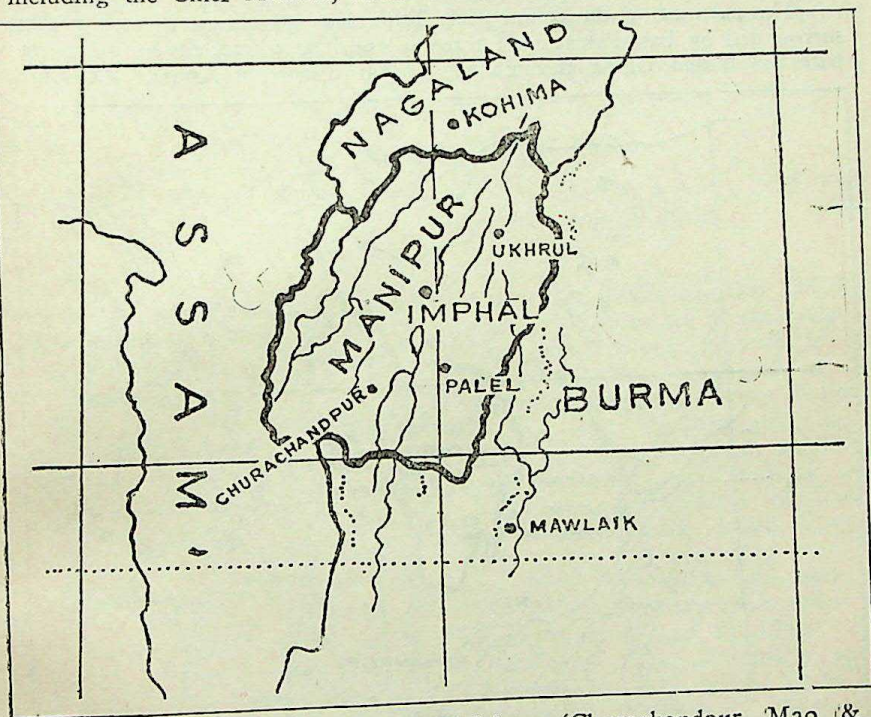
Manipur has a very slender link with India. The only means of communication with the rest of India are the railhead at Dimapur and the Imphal-Calcutta air service, both of which are liable to interruption, specially during the monsoons.

Agriculture is certainly the most important economic occupation of the Manipuri people. But it does not engage all the people all the year round. Accordingly, there has been certain long-established industries in Manipur, such as handlooms, sericulture and various other handicrafts. Handloom industry is the largest single cottage industry in Manipur. Every woman is a weaver irrespective of caste and creed and every house has a weaving unit. This industry provides direct or indirect part-time employment to almost everyone. Sericulture industry is also one of the oldest cottage industries in this Territory. Besides handloom and sericulture, there are also various other small industries run on a cottage scale, such as carpentry, blacksmithy, brick-making, bell-metal, leather, bamboo and cane works, etc.

The central valley of Manipur is inhabited by Meiteis, Manipuri Mussalmans, Lois and various other small communities, including tribals who have migrated from other areas more recently and settled there. The hill area of over 7,900 sq. miles is inhabited by Nagas and Kukis and other hill tribes. The people generally bear traits of Mongolian features. The Territory adjoins areas inhabited by people of the Mongolian stock.

Manipur is also well-known to everyone in connection with the justly famous Manipuri dances. Dances form an inseparable item of the social life of the common Meitei.

Under the provisions of the Government of Union Territories Act, 1963, the Territory is now governed by a Council of three Ministers including the Chief Minister, under a Chief Commissioner.



Sub-Division—(1) Hills Sub-Divisions (Churachandpur, Mao & Sadar Hills, Tamenlong, Tengnoupal, Ukhrul); (2) Manipur Plains Sub-Divisions (Bishenpur, Imphal East, Imphal West, Jiribam, Thoubal).

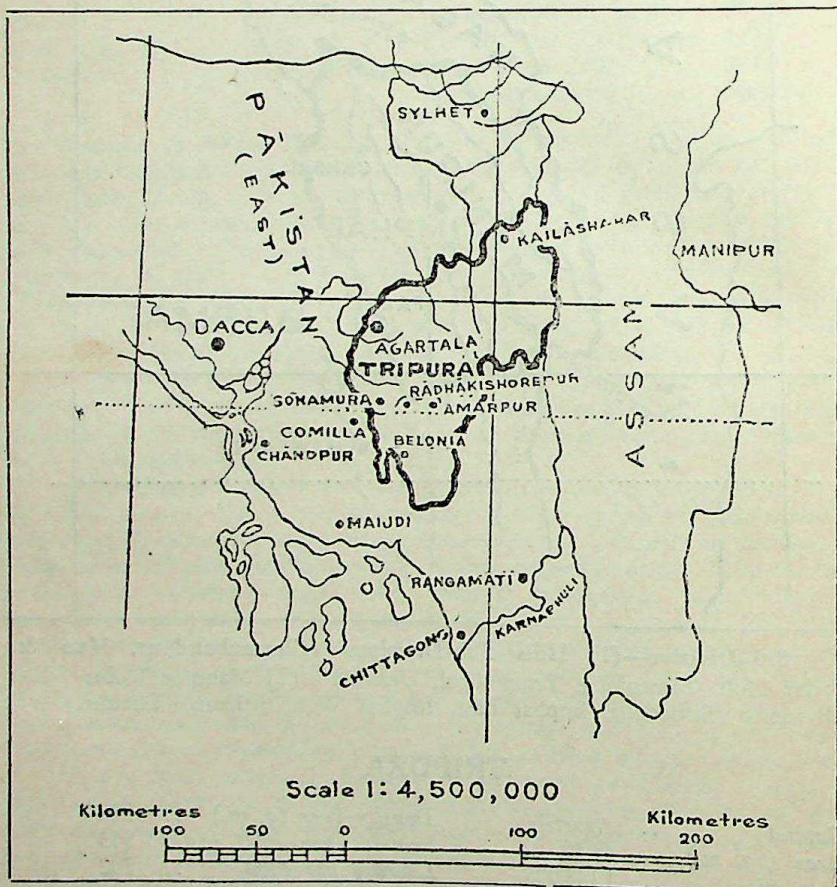
TRIPURA

Capital	.. Agartala	Density (per sq. m.)	.. 283
Area (sq. m.)	.. 4,036	Females per 1000 males	963
Population	.. 1,142,005	Literacy per 1000	.. 202

Tripura is an ancient princely hill State lying to the south-west of Assam and protruding into East Pakistan. Very rich in forest wealth as also mineral resources, its agricultural products include rice, jute, tea, sugarcane, cotton, oilseeds, etc. Besides hand-woven cotton goods of unique

designs, the Territory has at present very few industries. Forests play a very important role in the economy of Tripura and contribute more than 30 per cent of its total revenue.

The partition of the country left Tripura as an almost isolated pocket surrounded by East Pakistan on three sides. It is connected on the north with the Indian Union through the Cachar district of Assam. With the



creation of East Pakistan, Tripura was cut off from the mainland mass of India and for some time there was no connection between this Territory and the rest of India except the daily air service from Calcutta to Agartala. With the construction of a 126-mile road from Agartala to Charaibari (Assam), Tripura has now been road-linked with the rest of India. The

distance of Agartala from Calcutta is only 197 miles by air, but over land by railway, it is 1,505 miles.

The Territory is now governed by a Council of Ministers with a Chief Minister, under a Chief Commissioner under the provisions of the Government of Union Territories Act, 1963.

Units of Administration—Agartala, Amarpur, Belonia, Dharmannagar, Kailasahar, Kamalpur, Khowai, Sabroom, Sonamura, Udaipur.

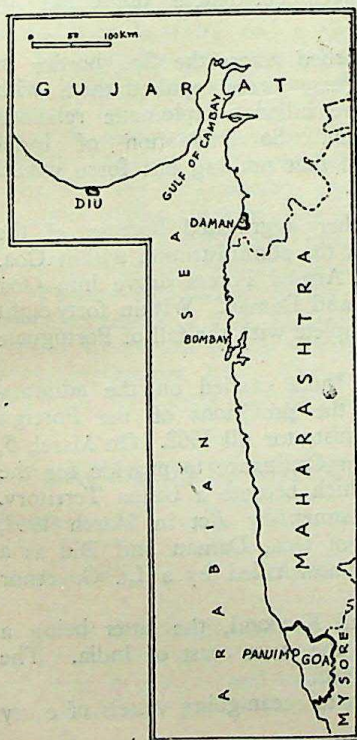
GOA, DAMAN AND DIU

<i>Capital</i>	.. Panjim	<i>Density (per sq. m.)</i>	.. 440
<i>Area (sq. m.)</i>	.. 1,426	<i>Females per 1000 males</i>	.. 894
<i>Population</i>	.. 626,667		

The Portuguese settlements in India were Goa, Daman and Diu. Goa lies 200 miles to the south of Bombay, Daman at the entrance of the Gulf of

Cambay and about 110 miles to the north of Bombay and Diu in the Saurashtra Peninsula, about 275 miles by sea from Bombay. Diu is a small island separated from the mainland by a narrow stretch of sea. The Portuguese enclaves of Dadra and Nagar Haveli, which formed parts of Daman, was taken over by the Goan Nationalists and merged with India as a Centrally-administered Territory on August 11, 1961.

Portugal's first connection with India was in 1498 when Vasco da Gama, on a mission to discover a new route to the land of fabulous riches and spices in the east, landed on the Calicut coast. The Zamorins of Calicut received the Portuguese with hospitality but were repaid with murder and pillage. The Portuguese, who came to trade, stayed on to build up an empire, and if they failed to build up a bigger one, it was only because of the emergence of two stronger competitors in the shape of the British and the Dutch. Albuquerque came and established himself in Goa in 1509, seizing it.



from the Sultans of Bijapur, was driven out in 1510, but re-established himself in November that year. After the conquest of Goa in 1509, the Portuguese conquered Diu in 1545 and Daman in 1559. The territory they then occupied were only one-fifth of its present area of 1,426 square miles, the balance four-fifths having been acquired from the Maratha rulers only in the 18th century.

After independence, the Government of India argued in vain with Lisbon through diplomatic channels for the inclusion of Portuguese India to Indian Union. India argued that geographically, ethically, culturally and racially the Territory rightly belong to India and, it firmly rejected Lisbon's argument that Goa was an integral province of Portugal—a little bit of Europe transplanted to Asia.

In July 1954, there was a civilian uprising in Goa, which seized the Portuguese enclaves of Dadra and Nagar Haveli. As a result India gained 188 sq. m. of real estate. They cost India six years of litigation in the International Court of Justice and stronger Portuguese opposition in coveted Goa.

In August 1955, unarmed Indians marched across the Goa border in a display of non-violent persuasion. Portuguese forces repulsed them with gunfire in which at least 16 Indians were killed. Diplomatic relations between the two countries were broken. So frustration of India gradually mounted. India became convinced that nothing but force would make Portugal go.

India's mounting frustration was further aggravated because of the Portuguese provocation and a breakdown in the administration within Goa. So at the end of December 1961, Indian Armed Forces drove into Goa from three sides; other troops entered Diu and Daman. Within forty-eight hours, the Indian occupation of Goa was complete with the fall of Portuguese territory in India in Indian hands.

Administration—The Government of India carried on the administration of Goa, Daman and Diu under the provisions of the Foreign Jurisdiction Act of 1947 by a Military Administrator till 1962. On March 5, 1962, the President of India promulgated an Ordinance to provide for the administration of Goa, Daman and Diu which became a Union Territory. The Ordinance was replaced by the Parliamentary Act in March 1962, to regularise the Ordinance and inclusion of Goa, Daman and Diu as a Union Territory in the Constitution. It is now ruled by a Lt. Governor advised by a Council of Ministers.

The people of Goa speak Marathi and Konkani, the latter being a dialect of Marathi, which is spoken along the west coast of India. The language of both Daman and Diu is Gujarati.

Mormugao is the chief port and is open to ocean-going vessels of every size from all parts of the world.

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Agriculture—is the main occupation of the people of this Territory. For the attainment of self-sufficiency in the matter of food, the Government has earmarked about Rs. 50 lakhs during the current financial year to boost farm output. Introduction of modern scientific techniques in the sphere of food production has been considered as one of the important tasks of the Government. In view of the fact that Goa is predominantly a horticultural area, the Government has decided to encourage cultivation of fruit plants, coconuts, pineapples, bananas, mangoes, jack-fruits and cashew. These are important garden crops which cover a sizable area of this Territory.

Industries—The mining and export of iron ore is the biggest single industry in Goa, providing employment to about 30,000 to 40,000 people. From a modest beginning in 1947-48, it has now become a major earner of India's foreign exchange. Recent drilling operation has proved the existence of good deposits of China clay and also limestone containing a high percentage of magnesium.

Other industrial units which are functioning are rice and flour mills, oil expellers, power-looms, handlooms, canning firms, brick and tile factories, ice and soap factories, and a carbonic gas plant.

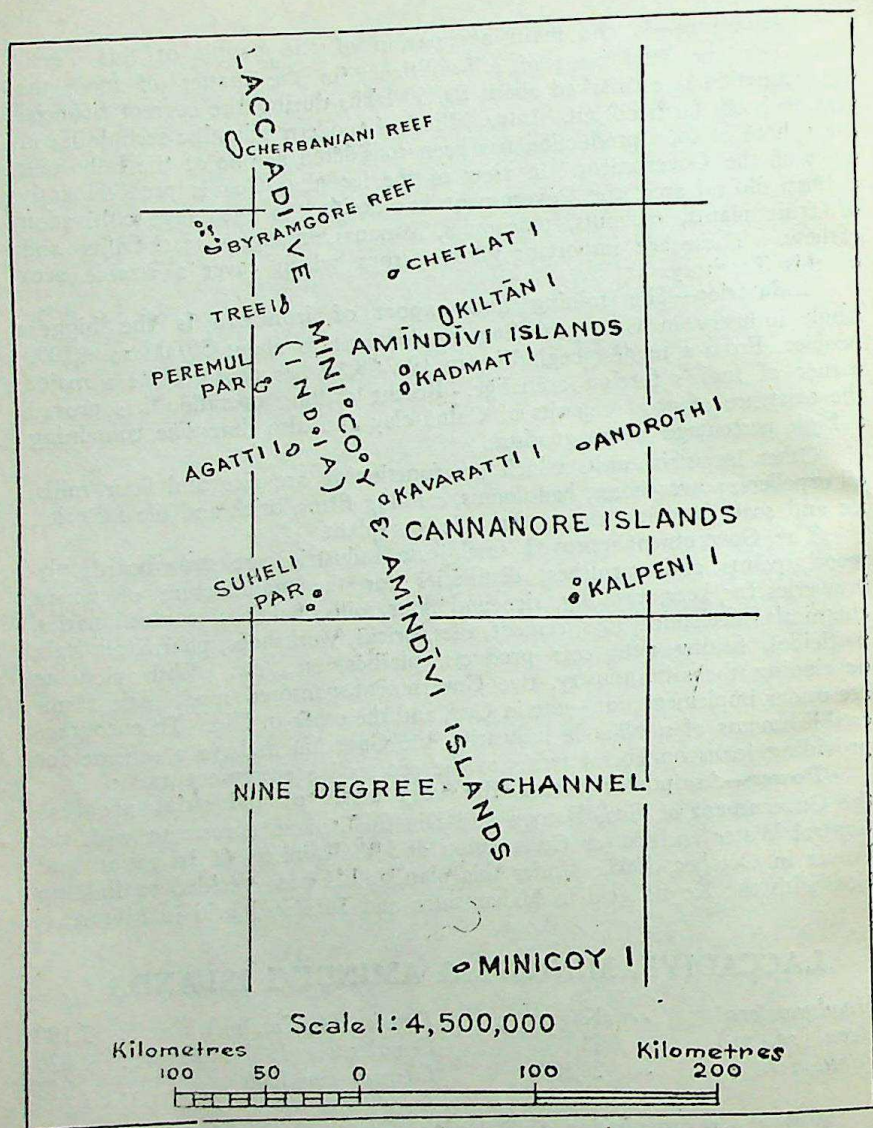
The Government-approved small-scale industries are straw-board, plywood, paints and varnishes, distilleries for the manufacture of wines, breweries for beer, canning, rice and flour mills, bakeries, confectionaries, chemicals, mechanical toys, cement, tiles, bricks, workshops, pharmaceuticals, pesticides, fishing nets, coir products, plastics, etc., etc. With view to developing the salt industry, two Government-sponsored model salt farms are under implementation—one in Goa, and the other in Diu. To encourage establishments of small-scale industries, the Government have a scheme for providing loans on liberal terms to the prospective entrepreneurs.

Power—As power forms the very basis of industrial progress, the Government of Goa, Daman and Diu finalised an agreement with the Central Water and Power Commission and the Ministry of Irrigation and Power in October, 1963. Under this plan, it has been decided to link up Goa with the Koyana grid in Maharashtra and Saraswati grid in Mysore.

LACCADIVE, MINICOY & AMINDIVI ISLANDS

<i>Headquarters</i>	.. Kavaratty	<i>Density (per sq. m.)</i>	.. 2,192
<i>Area (sq. m.)</i>	.. 11	<i>Females per 1000 males</i>	.. 1,020
<i>Population</i>	.. 24,108.	<i>Literacy per 1000</i>	.. 233

With the re-organisation of States, the Government of India took over the administration of the Laccadive, Minicoy and Amindivi Islands, a small sprawling group of coral islands in the Arabian sea, lying barely 200 miles away from the west coast of India. Rising from a common submerged



bank not more than 1,200 fathoms deep, they seem to be a portion of that old continent below supposed to have existed between India and Africa.

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With effect from 1st November, 1956, these islands are recognised as a Union Territory under an Administrator.

Only 10 islands out of a total number of 20, are inhabited. Minicoy, Kalpeni, Kavaratti, Agatti and Andorth lie in the Laccadive Group and Amini, Kadamath, Kiltan, Chetlath and Bitra in the Amindivi Group. Before the re-organisation, the Laccadive and Minicoy Islands were part of the Malabar district and the Amindivi Islands, of the South Kanara district, forming part of the composite State of Madras. The islands lie from North to South, Minicoy being the southernmost and Chetlath the northernmost.

The abundance of coconut trees constitutes at once the adornment as well as the wealth of the islands which offer very little scope for paddy cultivation, and the main items of agricultural development consist in increasing coconut yield. The main occupations of the inhabitants are fishing and copra industries.

The inhabitants of these islands are Muslims to a man. They are known as Moplas. Originally Hindus, the Malabar and South Kanara islanders appear to have been converted into Mohammedanism some time in the 14th century. Their dialect is old Malayalam with local variations. The Minicoites are more akin to the Maldivi inhabitants and their language, *Mahl* is said to be allied to primitive Sinhalese.

The society shows a queer mixture of Muslim law, *Marimukkatayam* or the matrilineal code of Naris and *Aliyasanthana*, another matrilineal system prevalent among Bunto and Billavas of South Kanara. Surnames and ancestral property go down in the female line.

Coir yarn, the main product of the islands, is exchanged for rice by the Central Government.

ANDAMAN & NICOBAR ISLANDS

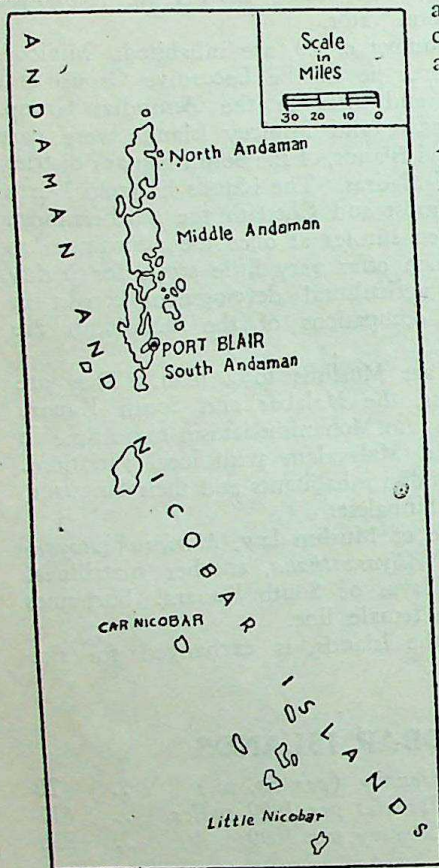
<i>Capital</i>	.. Port Blair	<i>Density (per sq. m.)</i>	.. 20
<i>Area (sq. m.)</i>	.. 3,215	<i>Females per 1000 males</i>	.. 617
<i>Population</i>	.. 63,548	<i>Literacy per 1000</i>	.. 336

The Andaman and Nicobar Islands were constituted into a Union Territory on November 1, 1956. The islands are in two groups, the Andamans and the Nicobars, with the Ten-Degree Channel separating the two. They stretch over 500 miles of water in the Bay of Bengal. Geographically, they are situated between the 6th and 14th parallel of north latitude and between 92° and 94° of each longitude.

The Andaman Islands, large and small, number about 204. Although there are numerous islands in the Andamans, the bulk consists of three closely-connected large islands, North, Middle and South Andamans which almost form one land mass known as Great Andamans. In the Nicobars, there are 19 islands of which 13 are inhabited by about 12,000 aboriginal

tribesmen. Most of them live on Car Nicobar, the northernmost of this

archipelago. Half the total area is covered by Great Nicobar which is almost uninhabited.



Port Blair, the capital of the Andaman and Nicobar Islands, is 120 miles from Cape Negrais in Burma, 780 from Calcutta, and 740 from Madras.

The islands possess a number of harbours and safe anchorage, notably Port Blair in the south, Alphinstone and Bonington in the middle and Port Cornwallis in the north. The bulk of the population in Andaman is from India and the indigenous tribes number only a few hundreds. These aborigines have cultural similarities with Samans of Malaya and Betas of the Philippines. They are a pigmy race and may be classified into the following four major groups — (1) Andamanese, who inhabit the coast-line of Middle Andaman and North Andaman, (2) Onges of Little Andaman, (3) Jarawas of Middle and South Andamans, and (4) Sentinelese of North Sentinel Island. The inhabitants of Nicobar Islands can be classified into two main groups, *viz.*, the Nicobarese and the Shom Pens. From the anthropological point,

the Nicobarese have a marked resemblance with the Indo-Chinese race. Unlike the Andamanese, the Nicobarese are a well-developed, good-humoured, lively race.

The land is fertile and yields not only rice but also rubber, coconuts, pepper, coffee, timber and cashew-nuts. The bulk of the revenue is derived from the exploitation of timber (yielding more than a crore of rupees a year) and the forest wealth includes good qualities of rosewood, sissoo and teak. Industries comprise plywood, oil milling, coir and matches.

The Nicobar Islands are situated to the south of the Andamans. There is a fine landlocked harbour between the islands of Kamotra and

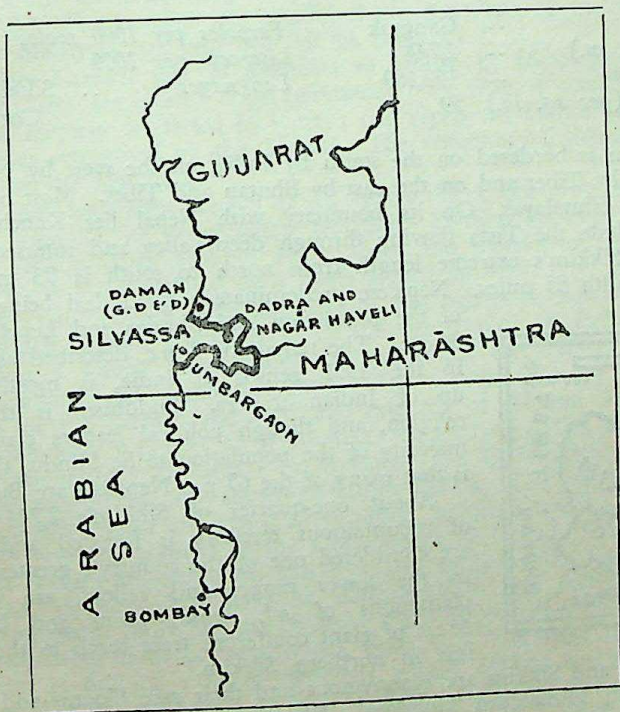
Nancowry known as Nancowry Harbour. Coconut is the main item of trade, and a major item in their diet; and they have been cultivating coconut for as long as any one can remember.

The Andaman and Nicobar Islands are administered by the President of India through a Chief Commissioner. An Advisory Council, consisting of five members nominated by the Central Government, is associated with the Chief Commissioner.

These islands have 0.02 of the total population and 0.27 p.c. of the total area of India. The decade 1951-61 has shown an increase of 105.19 p.c. in population.

DADRA AND NAGAR HAVELI

Headquarters	.. Silvassa	Density (per sq. m.)	.. 307
Area (sq. m.)	.. 189	Females per 1000 males	.. 894
Population	.. 57,963	Literacy per 1000	.. 95



Dadra and Nagar Haveli became the seventh Centrally-administered Territory on August 11, 1961. These two were Portuguese enclaves in India. According to the Union Territories Act, Dadra and Nagar Haveli were incorporated to Indian Union and received the President's assent. They are now under an Administrator appointed by the President and advised by the *Varisht Panchayat* which has a right to discuss and make recommendations.

The Territory comes under the jurisdiction of the Bombay High Court and has one representative in the Lok Sabha, nominated by the President.

STATES WITH SPECIAL RELATIONS

LECTORATES

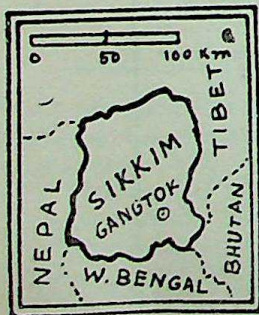
SIKKIM

<i>Capital</i>	..	Gangtok	<i>Females per 1000 males</i>	..	904
<i>Area (sq. m.)</i>	..	2,744	<i>Literacy per 1000</i>	..	123
<i>Population</i>	..	162,189	<i>Languages</i>	..	Sikkimese and Gorkhali
<i>Density (per sq. m.)</i>	59				

Sikkim is bordered on the south by India, on the west by Nepal, on the north by Tibet and on the east by Bhutan and Tibet. Most of Sikkim is in the Himalayas. On its boundary with Nepal lies Kanchanjunga. Rivers include the Tista flowing through deep valley and intersecting the country. Sikkim's extreme length from north to south is 73 miles and extreme width 55 miles. Nepalese predominate a good deal being 65 p.c.

of the population and Bhutias and Lepchas form 34 p.c. The remaining 1 p.c. described as 'others' in the 1961 census of India, is mostly made up of Indian traders. Buddhism is the State religion, and though political leaders claim large majority of the population to be Hindu, the truth is that many of the 65 p.c. Nepalese are Buddhists.

About one-quarter of Sikkim's 2,744 sq. m. of mountainous territory is forested and forests are considered one of the country's greatest assets. In the lower ranges and valleys, are valuable plantations of *sal*, *simul*, *tooni* and bamboo. Areas of giant coniferous trees reach to the snow-line in northern Sikkim.



Orchids and Sikkim are synonymous and their rare blooms add colour to this small Himalayan kingdom. Forests of rhododendrons cover the

entire mountain sides. Alpine flowers carpet the higher valley and passes. The citrus industry in Sikkim is closely linked with the economy of the people. Sikkim is the world's largest supplier of cardamom, and it is Sikkim's major cash crop. It grows almost like a weed on shaded mountain sides around Gangtok.

The ruling family hails from the minority community. There had been an agitation for the establishment of a domestic system of government and naturally it was the Nepalese who took the leading part in the political struggle.

Under the new system, Maharaja is the supreme ruler of Sikkim, sharing much of his power with the India-appointed *Dewan*. The Maharaja is assisted by an Executive Council. The Council is composed of one member of each leading party, who is appointed by the Maharaja from among those elected to the State Council. The Dewan is the President of the Council.

The Council Members hold office at the Maharaja's pleasure and are responsible for the executive and administrative functions of the Government. The Maharaja has veto over all its decisions.

The State Council has 20 members of which 12 (6 Nepalese and 6 Lepcha-Bhutias) are elected on a communal basis from 4 constituencies. One general member is elected by voters; one represents Lamas belonging to the monasteries recognised by the *Durbar*. The remaining 6 members are nominated by the Maharaja.

Sikkim has long been treated as an Indian State, but with a special position in view of its geographical situation. Political relation between India and Sikkim dates back to 1817. Until the transfer of power in August, 1947, it was regulated by a treaty signed in 1861.

A new treaty between India and Sikkim was signed on 5th December, 1950, by which Sikkim continues to be the protectorate of India. India has therefore a special responsibility in respect of the State's finances, external relations and communications. The Government of India is responsible for the defence and territorial integrity of Sikkim. It has the right to take such measures as it considers necessary for the defence of Sikkim or the security of India. In particular, the Government of India has the right to send troops to anywhere within Sikkim. The Government of Sikkim shall not import any arms, ammunition, or other warlike materials without the previous consent of the Government of India. The external relations of Sikkim are conducted and regulated solely by the Government of India, and Sikkim shall have no dealings with any foreign power. The Government of India has the exclusive right of constructing, maintaining and regulating railways, aerodromes, posts and telegraphs, telephones, wireless, etc. in Sikkim. Indian nationals within Sikkim are subject to the laws of Sikkim and people of Sikkim within India are subject to the laws of India. The Government of India is to pay Rs. 1 lakh annually

as subsidy to Sikkim. India, by treaty, has a *Representative*, permanently resident in Gangtok. Since 1949 an Indian *Dewan* or *Prime Minister* has become part of Sikkim's administrative machinery.

Sikkim has 0.04 p.c. of the total population and occupies 0.24 p.c. of the total area of India.

BHUTAN

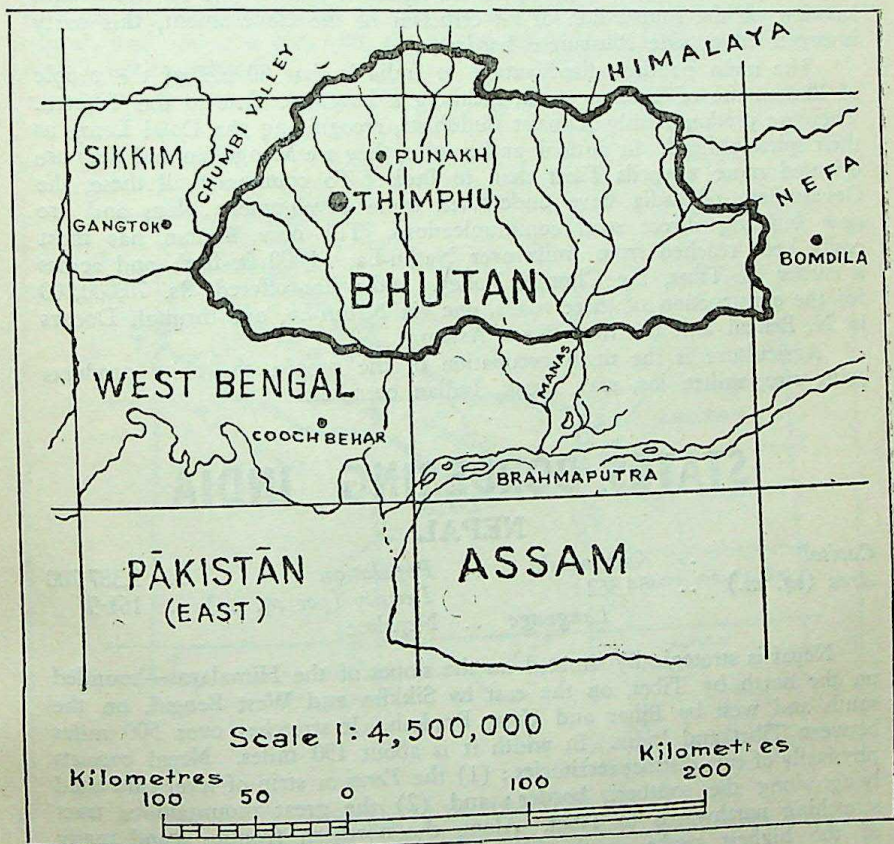
<i>Capital</i>	..	Punakha	<i>Population</i>	..	670,000
<i>Area (sq. m.)</i>	..	19,305	<i>Density (per sq. m.)</i>	..	34.7
		<i>Language</i>	..	Bhutanese	

Bhutan is a small landlocked semi-independent State lying on the south-east slopes of the Himalayas. It extends east and west for about 196 miles and is bordered on the west and north by Tibet, on the east by NEFA and Tibet, and on the south by West Bengal and Assam. Its maximum breadth is 90 miles. The importance of Bhutan to India's defence, occupying as it does a strategic place on the north-eastern border alongside Nepal and Sikkim, is obvious; specially on account of Tibet being completely under the control of Communist China.

Bhutan does not belong to the category of Indian States in the usual sense of the term. Bhutan is a protectorate, in respect of its foreign relations, of the Government of India. Before the conclusion of the new treaty between the Governments of India and Bhutan, signed at Darjeeling on August 8, 1949, the main instruments governing India's relations with Bhutan were the Sinchula Treaty of 1865 as amended by the Treaty of 1910, between the former Government of India and the Government of Bhutan. Under the Treaty of 1949, the Government of India undertook to exercise no interference in the internal administration of Bhutan. On their part, the Government of Bhutan agreed to be guided by the advice of the Government of India in regard to their external relations. The Government of India is to pay Bhutan annually a sum of Rs. 5 lakhs. The Government of India also returned to Bhutan Government about 32 sq-miles of territory known as Dewangiri. The Treaty provides, among other things, that Bhutan shall be free to import with the assistance and approval of India, whatever arms, ammunition, warlike materials, or stores Bhutan may require. This arrangement will hold good so long as the Government of Bhutan is friendly to India and there is no danger to India from such imports. Bhutan also agreed that there should be no export of arms and ammunition across the frontier of Bhutan either by the Government of Bhutan or by private individuals. The Treaty also provides for extradition.

Formerly 4 original provinces of Bhutan were ruled over by the Penlops, comprising with each other for an extension of power and influence. Who-

ever the strongest, became the temporal ruler—the Deb Raja, while the spiritual ruler, Dharma Raja, was the incarnation of the Buddha as was found, as need arose, among the highest families. In 1907 after the retirement of Deb Raja, the Penlop of the Tanga district, most powerful for many years, was elected by the Bhutanese Council of Lamas, abbots, council-



lors and laymen to become hereditary Maharaja of Bhutan. This arrangement was accepted by the British and later by the Government of India. The line of spiritual rulers became defunct. The present Maharaja is the third in the line of hereditary Maharaja. He rules autocratically with the assistance of the Prime Minister and is advised by a Council of Officers and

People's Representatives. The people of Bhutan consider their country's seclusion as its best defence. They are afraid of gradually being outnumbered by immigrating Nepalese. At present only about 20 p.c. of the population are Nepalese in the background. The Government have forbidden the settlement of new Nepalese arrivals. The Nepalese, through their Bhutan National Congress, started agitation against this discrimination. In view of the suppression of all criticism of the Government, this party is organised outside Bhutanese borders.

The main political disadvantage to India is that 80 p.c. of the people of Bhutan are of Tibetan stock, speaking a language close to the Tibetan. They are predominantly Lamaist Buddhists, recognizing the Dalai Lama as their spiritual head. In outlook and culture, they are Mongolian and they are oriented more towards Tibet than to India. To counteract all these, the Government of India have undertaken some development plans and are now building direct road communications. Till now Bhutan has most easily been reached from India over Nathu-La, 14,000 ft. high and across a corner of Tibet, the Chumbi Valley. India has offered Rs. 70,000,000 for the construction of three roads, one via Nathu-La, one through Dooars in N. Bengal and the third from Assam.

Agriculture is the main occupation of the people, the chief products being rice, millet, lac, wax, musk, Indian corn, etc.

STATES BORDERING INDIA

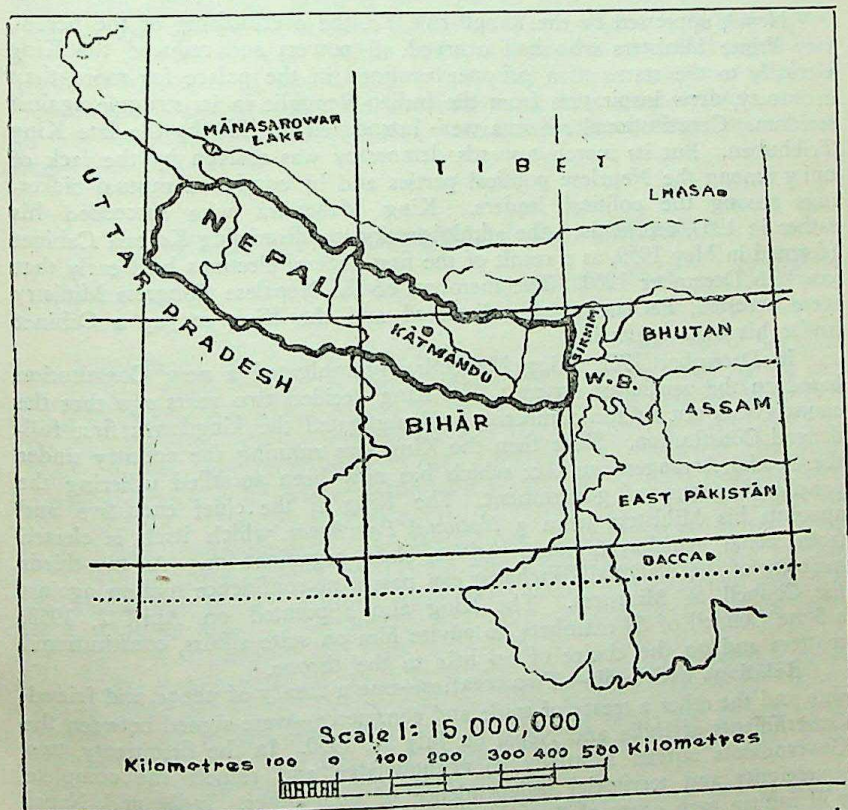
NEPAL

<i>Capital</i>	.. Kathmandu	<i>Population</i>	.. 9,387,700
<i>Area (sq. m.)</i>	.. 54,362	<i>Density (per sq. m.)</i>	.. 161.9
	<i>Language</i>	.. Nepalese	

Nepal is strategically situated on the slopes of the Himalayas—bounded on the north by Tibet, on the east by Sikkim and West Bengal, on the south and west by Bihar and Uttar Pradesh. It stretches over 500 miles between Tibet and India. In width it is about 150 miles. Nepal consists physically of two distinct territories: (1) the *Tera*i or strip of level cultivated lying along the southern border; and (2) the great mountainous tract stretching northwards to Tibet. Along the northern frontier stand many of the highest peaks of the Himalayan range, such as Mount Everest (29,028 ft.), Makalu (27,824 ft.), Kanchanjunga (28,146 ft.), Dhaulgiri (26,795 ft.), Gaurisankar (23,000 ft.) and numerous peaks varying from 20,000 to 24,000 feet. The valley of Nepal is the only densely populated area and has cities of Kathmandu, Bhatgaon and Patan. Nepal has three distinctions, *i.e.*, it is the only Hindu independent State in the world; it contains Mount Everest, the highest measured mountain peak in the

world; and it produces the toughest fighting men in the world—the Gorkhas.

This Himalayan kingdom is a self-sufficient country as far as food is concerned. It is claimed that the world's best rice is produced in this country. Some of the surplus agricultural products, such as rice and other grains, oilseeds, jute, and large quantities of timber, hides, etc. are exported to India and other countries. Among its mineral resources are gold, silver, copper, lead and iron ores; but the mining of these underground resources is still undeveloped.



The races occupying Nepal are of mixed Mongol origin. To the north in the higher mountain and valley, dwell the Bhutias or Tibetans; to the west, the Gurungs and Magras. The Murmis, Gorkhalis and Newaras occupy the central parts, Kiratis, Limbus and Lepchas the eastern. There

are also Brahmins and Chhatris in the hills, lesser tribes in the Terai and other malarious districts known as Khumhas, Tharus, Manji, etc.; but they are generally classed together as Aculias or dwellers in the districts. The Gorkhalis or Gorkhas are the descendants of the Brahmins and Rajputs who were driven out of India by the Muslims and took refuge in the western hilly lands and intermarried with the other races. The Bhutias, Newars, Limbus, Kiratis and Lepchas are all Buddhists, but their religion has been so mixed up with Hinduism that it is now hardly recognisable. The Magras and Gurungs are Hindus.

Nepal, oppressed by the Ranas' rule, *i.e.* the overlordship of the hereditary Prime Ministers who had usurped all powers and reduced the King virtually to the status of a prisoner confined in the palace for more than a century, drew inspiration from the Indian Republic in its struggle against serfdom. Constitutional reforms were introduced in 1951 by the late King Tribhuban. But its march towards democracy was marred by the lack of unity among the Nepalese political parties and by continued mutual bickerings among the political leaders. King Mahendra who succeeded his father in 1955, reorganised the administration by dismissing Koirala Cabinet (formed in May 1959, as a result of the first general elections held early that year) in December 1960. The members of the Nepalese Congress Ministry were arrested, Parliament was dissolved and the King set up a Cabinet under his own leadership.

In December 1962, King Mahendra promulgated a new Constitution based on the panchayat system. The King decided two years ago that the country was not fit for democracy and abrogated the kingdom's first full-fledged Constitution. Since then the King was running the country under the Special Arrangements Act which has now been annulled ushering the panchayat system of government. The King is the chief executive and appoints his Ministers from a *National Panchayat* which itself is elected from zonal panchayats and various class organizations. A two-thirds majority of the National Panchayat can pass a no-confidence motion against the Council of Ministers. The King also appointed on April 2, 1963, a State Council of 69 members, to advise him on state affairs, constitutional matters and on the choice of an heir to the throne.

Relations with India—Two treaties—one a treaty of peace and friendship and the other a treaty of trade and commerce—were signed between the Governments of India and Nepal on July 31, 1950. In the first treaty, two Governments agreed mutually to acknowledge and respect the complete sovereignty and territorial independence of each other. India and Nepal will inform each other of "any serious friction or misunderstanding" with a neighbouring State likely to impair their relations.

Two Governments agreed to appoint ambassadors. The Government of Nepal is free to import from and through India, arms, ammunition, or warlike materials and equipment for the security of Nepal. Both Govern-

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 ments agreed to grant on a reciprocal basis, to the nationals of one country in the territories of the other the same privileges in the matter of residence, ownership of property, participation in trade and commerce, movement and other privileges of a similar nature. In economic matters, the Government of each country guarantees "national treatment" to the citizens of the other.

Although traditionally bound with India in friendship, there was signs of growing anti-Indian sentiments due to Chinese expansionism in that region. As a symbol of amity, India built the 75-mile Tribhuban Rajpath, a heavy traffic-taking highway, under the Colombo Plan across the three Himalayan ranges and gifted it to Nepal in 1957. This road ultimately connects the Nepalese capital with the Indian border station of Raxaul in U.P. The Rs. 47-crore Gandak Project which will provide assured irrigation to about 40 lakh acres of land in Nepal, Bihar and U.P., is another example of Indo-Nepalese co-operation. In recognition of the great fighting ability of the Gorkhas, India has retained several Gorkha contingencies in her army (See also *Index*).

PEOPLE'S REPUBLIC OF CHINA

<i>Capital</i>	..	.. Peking	<i>Population (1965)</i> .. 647,000,000
	<i>Area</i>	..	.. 4,300,000 sq. m.

The Chinese coast (c. 2,150 miles long) fronts on the Yellow Sea, East China Sea, South China Sea and China is elsewhere bordered on the east by the U.S.S.R. and Korea, on the north by the U.S.S.R. and the Mongolian People's Republic, on the west by the U.S.S.R. and on the south by India. Tibet, Burma and Indo-China. China comprises 27 provinces (including *Formosa* which is known as Nationalist China and is quite separate from the mainland). Foreign trade is carried on through the ports of Dairen and Port Arthur, agriculture in the Manchurian plain, mining in the south-west and industry in Mukhen, Harbin and Changchun. Sinkiang province in the far west is also a distinct region with ethnic and economic affiliations with Central Asia. Tibet which was once designated a 'special area' of China, is a province of China since 1959.

China is essentially an agricultural and pastoral country, farmers constituting about 80 p.c. of the population. Rice is the staple food. Wheat, barley, maize, millets, and other cereals, peas and beans are grown in the northern provinces, and rice and sugar in the south. Cotton, tea, hemp, jute and flax are the most important crops.

Except for antimony and tungsten, which supply most of the world's demand, China lacks metallic minerals. Coal and salt deposits are adequate for national needs. Cotton textiles and processed foods are the principal manufactures though, traditionally, China is famous for silks and porcelain.

Silk-worm rearing is one of the oldest industries in China. The needs of the dense population are not entirely met by maximum cultivation even if loss by soil depletion, erosion and destruction of forests is not taken into account. The excess of works and, except in Manchuria, the near absence of agricultural machinery result in low-labour productivity. Heavy food imports and the restricted class of exports create a growing unfavourable trade balance and China's continually worsening economy drives many emigrants to S.E. Asia and Indonesia.

Confucianism, Buddhism and Taoism are the chief religions of China. Islam, chiefly found in the south-west, is the largest monotheistic sector of China. There are also few million Christians.

After the rise and fall of numerous dynasties through the ages in China, came the Sung dynasty (960-1279). While the Sung ruled Central China, the northern part of the country was swept away by the Mongols under Jenghiz Khan. His grandson, Kublai Khan, founder of the Youan dynasty (1260-1368) was the most prosperous ruler of China, whose great realm was described in all its richness by the traveller, Marco Polo. Then came the Ming dynasty (1368-1644) but this was swept away by the establishment of Ch'ing dynasty (1644-1912). Foreign European countries began to open limited trade with China. This provoked Opium War (1839-42) which gave supremacy to England to establish extra-territoriality. In this wake, other foreign countries wanted to establish open-door policy—that all nations should enjoy equal access to trade in China instead of seeking separate zones of influence. This led to the Boxer Rebellion (1860) supported by the Chinese Empress Tz'u Hsi.

Continued rebellion, chiefly by Sun-Yat-sen, led in 1911 to a republican revolution and to the Emperor's abdication in 1912. Sun, the first President of the Republic, resigned early that year in favour of Yuan Shih-kai, who established a repressing military rule which led Sun's followers to revolt sporadically.

Early in the 1st World War, Japan which was already at war with China, presented 21 Demands designed to make China a virtual protectorate, but the move was frustrated. In 1917, China joined the Allied side to the great discomfiture of Japan. China now secured international position by the nine-power Treaty in 1921-22, which guaranteed Chinese territorial integrity and open door policy. After 1919 civil war raged between Sun's party and the National Government with its War Lords in the north. The Kuomintang under the virtual dictatorship of Chiang Kai-shek established in 1912, a government in Nanking and obtained foreign recognition. But a split had developed between the Kuomintang and the Communists. Taking advantage of the internal quarrel of China, Japan began Second Sino-Japanese War by occupying Manchuria and constituting it, in 1932, the puppet State of Manchukuo. Early in 1937, Chiang and the Communists reached an agreement and thereafter co-operated against the

Japanese. Japan's attack on U.S. and British bases in 1942 merged the war in China with the Second World War. But rift between Chiang and the Communists did not close; China was much weakened at the war's close. The abolition of extra-territoriality and the easing of the Japanese threat did not bring peace to China. There was conference between Chiang, Mao Tse-tung and American authorities, but the breach was not healed. Though the Russians evacuated Manchuria, civil war raged through 1946. Late in that year, a national assembly, boycotted by the Communists, adopted a Constitution to be effective in 1947. With the help of U.S.A. Chiang Kai-shek, early in 1948, met the first elected legislature composed largely of Kuomintang members and including no Communists at all. The Chiang Government, however, did not last long. The Communists gained upper hand in the civil war and proclaimed rule over China in September, 1949. The U.S. Department of State announced that no further aid would be given to the Chiang Government. On January 1950, recognition of the Chinese Communist Government had been extended by U.S.S.R., Great Britain, India and other nations. In late April, 1950 Chiang had only the island of Formosa in his possession and seemed doomed.

TIBET

<i>Capital</i>	.. Lhasa	<i>Population</i>	.. 1,270,000
	<i>Area (sq. m.)</i>	.. 471,660	

Boundaries—Tibet is bordered on the north by Sinkiang province of China and on the south by Nepal, Burma, India and Pakistan. It is situated between the Himalaya and Kunhun mountains. It is the highest country in the world- averaging 16,000 feet in elevation and having many peaks reaching more than 25,000 feet.

History—The Chinese sovereignty over Tibet was established in the 18th century. The country was invaded by a British expeditionary force in 1904 but the Anglo-Russian convention of 1907 recognised China's influence over Tibet and stipulated that neither Russia nor British should interfere in Tibet's affairs.

In 1918, Chinese aggression on the border led to successful retaliation by Tibet in which the Chinese were driven beyond upper waters of Yangtse, but from 1931-33 there was confused fighting on the China-Tibet border, as a result of which the Tibetans lost their hold on most of the territory to the east of the upper Yangtse which they re-occupied in 1918. Since then the upper Yangtse remained roughly the *de facto* frontier between Tibet and China.

In October 1950, Chinese Communist forces invaded eastern Tibet. Dalai Lama later left Lhasa and set up his government at Yatung, near Sikkim frontier. On May 23, 1951, an agreement was reached whereby

Tibet accepted Chinese sovereignty and a Communist military and administrative headquarters was set up. A series of revolt against Chinese rule over several years culminated on March 17, 1959 in a rising in Lhasa. The rebellion was suppressed by the Chinese troops and military rule imposed. The revolts now began to spread over the whole area of outer Tibet and slowly crept up to Lhasa. With the intensification of the revolt in 1958 and early 1959, Dalai Lama was asked to help the Chinese in the suppression of revolts and to visit Peking, which Dalai Lama refused. While fighting was going on in the capital, Dalai Lama slipped off from the city and after 15 days of perilous journey reached India and was granted political asylum by the Government of India. On March 28, 1959, the Chinese Prime Minister issued an order dissolving the Tibetan Government and setting up a 16-member Preparatory Committee for Tibetan Autonomous Region, with the Panchen Lama as the Chairman and including 4 Chinese officials. Dalai Lama, now in exile in India, declared a 'new constitution' for Tibet in March, 1963.

Relations with India—With the establishment of Communist rule over Tibet an agreement was signed between India and China on 20th April, 1954. In the text of the agreement the following five basic principles are mentioned—mutual respect for each other's territorial integrity and sovereignty, mutual non-aggression, mutual non-interference in each other's internal affairs, equality and mutual benefit and peaceful co-existence. The main terms are as follows—(1) China may establish trade agencies at New Delhi, Calcutta and Kalimpong; (2) Government of India may establish trade agencies at Yatung, Gyantse and Gartok; (3) Government of China agrees to specify (a) Yatung, (b) Gyantse and (c) Phari as markets for trade; the Government of India agrees that trade may be carried on in India including places like (a) Kalimpong, (b) Siliguri, (c) Calcutta according to customary practice; (4) pilgrims from India may visit Kailash and Manassarovar in Tibet region and pilgrims from Tibet may visit Banaras, Sarnath, Gaya and Sanchi in India. Pilgrims customarily visiting Lhasa may continue to do so in accordance with usual custom.

Religion—Religion is the predominant factor in Tibet's social system. Lamaism, a late form of Buddhism, controls many monasteries of Tibet.

PAKISTAN

<i>Capital</i>	.. Islamabad (Rawalpindi)	<i>Cities :</i>		
<i>Area (sq. m.)</i>	.. 364,737	Lahore	..	1,297,000
<i>Population (1965)</i>	100,761,700	Karachi	..	916,000
<i>Density (per sq. m.)</i>	257.2	Dacca	..	558,000
<i>Principal languages</i>	Bengali (official), Urdu (official), English.	Hyderabad	..	434,000
		Rawalpindi	..	343,000
		Chittagong	..	194,000

By the Indian Independence Act of 1947, Pakistan was constituted a Dominion in the British Commonwealth. It became a Republic on 23rd March, 1956, which was abrogated when Mohammed Ayub Khan, Commander-in-Chief of the Pakistan Army, seized power on 7th October, 1958 and proclaimed Martial Law in the country with himself as the Chief Martial Law Administrator. All democratic political institutions were abolished on 28th October, 1958 and General Ayub Khan became the President with an 11-man Cabinet and no legislature.

After many vicissitudes and hardening of public and world opinion, Field Marshal Mohammed Ayub Khan, in exercise of the mandate given to him on 8th February, 1960, promulgated the Constitution of the Republic of Pakistan on 1st March, 1962, declaring that the "sovereignty over the entire Pakistan belong to Almighty Allah alone."

1. *Discrimination against the non-Muslims*—Art. 10(a) enjoins that the President must be a Muslim. Part X (Arts. 199-207) provides for special state patronage for Islam. A non-Muslim can however become the Governor of a Province (Art. 57).

2. *Undue weightage to Western wing*—(Art. 20) East Pakistan with a population of nearly 51 million will return the same number of members to the Central Legislature, the National Assembly, as the Western wing with less than 43 million, 78 from each.

Similarly the Provincial Legislatures also will have 155 members each.

3. *Indirect Elections*—(Art. 155 et seq.). Each Province shall have not less than 40,000 territorial units. Each unit shall from time to time, as necessary, elect an Elector for the unit by universal adult franchise. They will constitute the Electoral College of Pakistan. Number of units in the two wings must be identical (Art. 155(2)).

The Electors included in the territorial jurisdiction of Central Constituency will elect the member for the Central Legislature and those in provincial one for the Provincial Assembly.

The President shall be elected by the Electoral College. If the number of candidates is more than three, a joint sitting of the National Assembly and the two Provincial Assemblies will elect 3 candidates by secret ballot (Arts. 165 and 167).

The capital will be at Islamabad in Rawalpindi district of West Pakistan. There shall be a second capital at Dacca in East Pakistan. The principal seat of the National Assembly shall be at Dacca and of the Central Government at Islamabad (Art. 211). The National languages of Pakistan are Bengali and Urdu (Art. 215).

Field Marshal Md. Ayub Khan shall be the first President. His term will be 3 years and 60 days (Art. 226).

West Pakistan—The establishment of West Pakistan Act, 1955 which came into force on 3rd October, 1956, incorporated (1) the former Governors' provinces of Punjab, North-West Frontier and Sind, (2) the former Chief Commissioners' provinces of Baluchistan and Karachi, (3) the States of Bhawalpur and Khairpur and the Baluchistan States Union, (4) the Tribal Areas of Baluchistan, Punjab, and N.-W. Frontier and the States of Amb, Chitral, Dir and Swat into the Province of West Pakistan from October 14, 1956. An executive order issued on August 2, 1960, proclaimed Rawalpindi as the capital of Pakistan in place of Karachi and Karachi in future would be known as Federal Territory of Karachi.

The western portion of Pakistan contains much desert and barren rocky tracts. At the same time, it contains the great valley of the Indus and the fertile and well-watered plains of the western Punjab. In addition, in the former Sind Province, there is the vast area served by the great irrigation systems stemming from the Sukkur Barrage on the Indus.

East Pakistan—Comprises the eastern territories of the partitioned province of Bengal and Sylhet, formerly a district of Assam. It has more than half of the population of Pakistan but only 15 p.c. of the total land area.

The eastern portion is tropical, heavily watered, lying along and largely below the valley of the Brahmaputra, widely intersected by waterways.

The main occupation of the people is agriculture; nearly 80 per cent of the people are so engaged. The main food crops are rice and wheat. The main commercial crops are cotton, rape and mustard and jute.

Population—The total population of Pakistan according to 1961 census was 93,831,982. Of these, 50,853,721 lived in East Pakistan (54 p.c.) and 42,978,261 in West Pakistan (46 p.c.). The population of Pakistan in 1961 showed an increase of 23.9 p.c. over that in 1951, thus giving an average annual increase of 2.2 p.c. during the decade.

Muslims were by far the largest religious group being 88 p.c. of the total population of Pakistan. Hindus formed the second largest religious group, with about 11 p.c. of the total population—18 p.c. in East Pakistan and 1.5 p.c. West Pakistan. The literacy rate of the whole country was 19.2 p.c. (21.5 p.c. in East Pakistan and 16.3 p.c. in West Pakistan). Males had a literacy rate of 28 p.c., nearly 19 p.c. higher than that of females.

Languages—The census of 1961 listed 24 languages as spoken in Pakistan. Bengali was spoken by 55.5 p.c. of the population and stood first in the list of mother languages; while Punjabi was second being spoken by 29 p.c. Urdu, Sindhi and Pushtu were the other leading mother tongues, varying from 5.5 to 3.7 p.c. The census showed Pakistan to be the sixth most populous country in the world (See also *Index*).

BURMA

<i>Capital</i>	.. Rangoon	<i>Population</i>	.. 24,229,000
	<i>Area (sq. m.)</i>	.. 261,789	

Burma forms the western portion of the Indo-Chinese district of Asia. It has a frontier with India to the north-west.

The Union of Burma comprises Burma proper, administered direct by the Central Government and also the Shan State, Kachin State, Kawthoolei State and Kayah State, each with their own State Governments.

Burma became an independent republic outside the British Commonwealth on January 4, 1948. It was a bicameral parliamentary democracy with an elected Head of State. On March 2, 1962, the army staged a *coup d'état*, abolished the Parliament, suspended the Constitution and imprisoned most of the Cabinet. The Revolutionary Council of senior officers under General Ne Win have since taken a number of measures to establish State Socialism in Burma in line with the policy statement "The Burmese Way to Socialism."

Three-quarters of the population depend on agriculture; the chief products are rice, oilseeds, maize, millet, cotton, bean, wheat and grain. Rice is the mainstay of Burma's economy and has more than 70 p.c. of the total cropped area under it (See also *Index*).

Burma is rich in minerals like petroleum, lead, silver, tungsten, zinc, tin, wolfram and gem-stones.

CEYLON

<i>Capital</i>	.. Colombo	<i>Population</i>	.. 10,624,500
	<i>Area (sq. m.)</i>	.. 25,332	

Ceylon is an island in the Indian Ocean, off the southern tip of the peninsula of India and separated from it by a narrow strip of shallow water, the Palk Strait.

The races of Ceylon are low-country Sinhalese, Kandyan Sinhalese, Ceylonese Tamils, Indian Tamils, Ceylonese Moors, Indian Moors, Burghers, and Eurasians, Malayas and Veddahs.

On February 4, 1948, Ceylon became a self-governing Dominion of the British Commonwealth of Nations under the *Ceylon Independence Act, 1947*. The Parliament of Ceylon consists of (a) the Queen (represented by the Governor-General) and (b) two houses, viz., House of Representatives consisting of 157 members and the Senate consisting of 30 members.

The staple products of the island are agricultural (See also *Index*).

INDIAN DIRECTORY

PRESIDENT OF INDIA—**Dr. S. Radhakrishnan.**

VICE-PRESIDENT OF INDIA—**Dr. Zakir Hussain.**

MEMBERS OF THE CENTRAL CABINET

- | | |
|--|--|
| Sm. Indira Gandhi— <i>Prime Minister and Minister of Atomic Energy.</i> | <i>Communications & Parliamentary Affairs.</i> |
| Gulzarilal Nanda— <i>Minister of Home Affairs.</i> | M. C. Chagla— <i>Minister of Education.</i> |
| Jagjivan Ram— <i>Labour & Employment and Rehabilitation.</i> | D. Sanjivayya— <i>Minister of Industry.</i> |
| Sardar Swaran Singh— <i>Minister of External Affairs.</i> | Sachindra Chaudhury— <i>Minister of Finance.</i> |
| Y. B. Chavan— <i>Minister of Defence.</i> | Asoke Mehta— <i>Minister of Planning.</i> |
| S. K. Patil— <i>Minister of Railways.</i> | G. S. Pathak— <i>Minister of Law.</i> |
| C. Subramaniam— <i>Minister of Food & Agriculture and Community Development.</i> | N. Sanjeeva Reddy— <i>Minister of Transport, Aviation, Shipping & Tourism.</i> |
| Satya Narayan Sinha— <i>Minister of</i> | Manubhai Shah— <i>Minister of Commerce.</i> |
| | Fakhruddin Ali Ahmed— <i>Minister of Irrigation & Power.</i> |

MINISTERS OF STATE

- | | |
|---|---|
| Mehr Chand Khanna— <i>Minister of Works & Housing.</i> | Dr. A. M. Thomas— <i>Minister of Defence, Production.</i> |
| Dr. Sushila Nayar— <i>Minister of Health & Family Planning.</i> | T. N. Singh— <i>Minister of Iron & Steel.</i> |
| Jaisukh Lal Hathi— <i>Minister of Home Affairs.</i> | Jagannath Rao— <i>Minister of State in the Dept. of Parliamentary Affairs & Communication.</i> |
| K. Raghuramaiah— <i>Minister of Supply, Technical Development & Social Welfare.</i> | Dinesh Singh— <i>Minister of External Affairs.</i> |
| O. V. Alagesan— <i>Minister of Petroleum & Chemicals.</i> | C. M. Poonacha— <i>Minister of Transport, Aviation, Shipping & Tourism.</i> |
| Dr. Ram Subhag Singh— <i>Minister of Railways.</i> | P. Govinda Menon— <i>Minister of Food & Agriculture and Community Development and Co-operation.</i> |
| Dr. K. L. Rao— <i>Minister of Irrigation & Power.</i> | |
| B. R. Bhagat— <i>Minister of Finance.</i> | |

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 Bibhudendra Misra—*Minister of Raj Bahadur—Minister of Information & Broadcasting.*
 C. R. Pattabhiraman—*Minister of Law.* S. K. Dey—*Minister of Mines & Metals.*

DEPUTY MINISTERS

- Shah Nawaz Khan—*Dy. Minister in the Ministry of Labour, Employment & Rehabilitation.*
 P. S. Naskar—*Dy. Minister in the Ministry of Home Affairs.*
 Lalit Narayan Mishra—*Dy. Minister in the Ministry of Irrigation & Power.*
 Sm. Soundaram Ramachandran—*Dy. Minister in the Ministry of Education.*
 D. R. Chavan—*Dy. Minister in the Ministry of Labour, Employment & Rehabilitation.*
 Sm. Maragatham Chandrasekhar—*Dy. Minister in the Department of Social Welfare.*
 Sham Nath—*Dy. Minister in the Ministry of Railways.*
 B. C. Bhagavati—*Dy. Minister in the Ministry of Works & Housing.*
 Shyam Dhar Misra—*Dy. Minister in the Ministry of Food, Agriculture, Community Development & Co-operation.*
 Prakash Chandra Sethi—*Dy. Minister in the Ministry of Iron & Steel.*
 Bhakt Darshan—*Dy. Minister in the Ministry of Education.*
 B. S. Murthy—*Dy. Minister in the Ministry of Health & Family Planning.*
 Anna Saheeb Shinde—*Dy. Minister in the Ministry of Food, Agriculture, Community Development & Co-operation.*
 V. C. Shukla—*Dy. Minister in the Ministry of Home Affairs.*
 Sm. Nandini Satpathy—*Dy. Minister in the Ministry of Information & Broadcasting.*
 Sardar Iqbal Singh—*Dy. Minister in the Ministry of Petroleum & Chemicals.*
 S. Ahmed Mehdi—*Dy. Minister in the Ministry of Mines & Metals.*
 Shafi Quareshi—*Dy. Minister in the Ministry of Commerce.*
 Jahenara Jaipal Singh—*Dy. Minister in the Ministry of Transport & Aviation.*

PARLIAMENTARY SECRETARIES

- D. Ering (*Ministry of External Affairs*), Lalit Sen (*Prime Minister's Sectt.*), S. C. Jamir (*Ministry of External Affairs*), Sarojini Mahishi, Bhanu Prakash Singh.

GOVERNORS, LT. GOVERNORS, CHIEF COMMISSIONERS

- Andhra Pradesh—Pattom A. Thanu Pillai.
 Assam—Vishnu Sahay.
 Bihar—Ananthasayanam Aiyangar.
 Gujarat—Nityanand Kanungo.
 Jammu & Kashmir—Dr. Karan Singh.

<i>Kerala</i> —Bhagwan Sahay.	<i>Manipur</i> (Chief Commissioner)— Baleshwar Prasad.
<i>Madhya Pradesh</i> —K. C. Reddy.	<i>Tripura</i> (Chief Commissioner)— M. C. Mukherjee.
<i>Madras</i> —H. H. Maharaja Sri Jayachamaraja Wadiyar.	<i>Andaman & Nicobar Islands</i> (Chief Commissioner)—B. N. Mahesh- wari.
<i>Maharashtra</i> —Dr. P. V. Cherian.	<i>Laccadive, Minicoy & Amindivi Islands</i> (Administrator)—C. H. Nair.
<i>Mysore</i> —V. V. Giri.	<i>Delhi</i> (Chief Commissioner)— S. Ranganathan.
<i>Nagaland</i> —Vishnu Sahay.	<i>Pondicherry</i> (Lt. Governor)—S. L. Sailam.
<i>Orissa</i> —A. N. Khosla.	<i>Dadra and Nagar Haveli</i> (Adminis- trator)—K. R. Damle.
<i>Punjab</i> —Hafiz Mohammad Ibrahim (on leave); Sardar Ujjal Singh (acting).	
<i>Rajasthan</i> —Dr. Sampurnanand.	
<i>Uttar Pradesh</i> —Biswanath Das.	
<i>W. Bengal</i> —Sm. Padmaja Naidu.	
<i>Goa, Daman & Diu</i> (Lt. Governor) —K. R. Damle.	
<i>Himachal Pradesh</i> (Lt. Governor)— V. Viswanathan.	

PRESIDENT'S SECRETARIAT

Secretary to the President—Y. D. Gundevia.

Deputy Secretary—V. J. Moore.

Military Secretary—Major-General G. S. Gill.

PRESIDENT'S BODYGUARD

Chief Commandant—Major-General G. S. Gill.

CABINET SECRETARIAT

(Department of Cabinet Affairs)

<i>Cabinet Secy.</i> —Dharma Vira.	<i>Joint Secy.</i> —Ajit Mozoomdar.
<i>Special Secy., Military Wing, Cabin- et Sectt.</i> —H. C. Sarin.	<i>Dy. Secy. (Military)</i> —Air Commo- dore C. L. Mehta.
<i>Addl. Secy. and Chairman, J.I.C.</i> — N. Sahgal.	<i>Dy. Secretaries</i> —V. B. Eswaran, P. N. Kaul, T. S. Murty and N. K. Srinivasan.
<i>Director-General of Security</i> —B. N. Mullick.	

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(Department of Statistics)

Officer-on-Special Duty—K. Ram. *Secy.*—Dr. K. R. Nair.
Director, C.S.O. & ex-officio *Jt.* *Dy. Secy.*—M. Balakrishna Menon.

CENTRAL STATISTICAL ORGANISATION

Director—Dr. K. R. Nair. and Dr. S. G. Rao (I. S. Wing,
Jt. Directors—Dr. Uttam Chand, Calcutta).
 Dr. S. G. Tiwari, Dr. K. S. Rao,

(Directorate of National Sample Survey)

Chief Director—Rajeshwari Prasad.

PRIME MINISTER'S SECRETARIAT

Secy., Prime Minister—L. K. Jha. *Dy. Secy.*—L. M. S. Rajwar.
Jt. Secretaries, Prime Minister—C. P. *Private Secretary, Prime Minister*—
 Srivastava and Rajeshwar Prasad. S. P. Khanna.
 Private Secretary (Personal), Prime
 Minister—V. S. Venkataraman.

(Department of Atomic Energy)

Chairman, Atomic Energy Commission & Secy.—Dharma Vira. *Secy., Atomic Energy Commission*
 and *Jt. Secy.*—H. K. Kochar.
Member for Finance, Atomic Energy Commission—S. Jagannathan. *Controller, Atomic Energy Establishment, Trombay and ex-officio*
Members, Atomic Energy Commission—J. R. D. Tata, S. S. Khera *Jt. Secy.*—E. C. Allardice.
 and Dharma Vira. *Chief Vigilance Officer*—V. M. Parulekar.
Jt. Secretaries—R. Bhaktavatsalu and *Dy. Secretaries*—R. Shroof, R. C. Sharma, Y. S. Das, P. Muralidharan, Sm. S. Kochar and A. Gnanaolieu.

(Department of Parliamentary Affairs)

Secy.—Kailash Chandra.

MINISTRY OF TRANSPORT & AVIATION

Secy.—V. Shankar. *Dy. Secy.*—Gopeshwar Nath.
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reign Exchange & Foreign Aid). *Adviser (Plan, Information and*
Members—Bali Ram Bhagat, G. L. *Publicity)*—M. V. Desai.
Nanda, Sachin Chaudhury, *Adviser (Construction)*—Maj. Gen.
Sardar Swaran Singh, C. Subra- Harkirat Singh.
manian and T. N. Singh. *Adviser (Irrigation & Power)*—
Members—Prof. P. C. Mahalanobis Balwant Singh Nag.
(Perspective Planning), Tarlok *Economic Adviser*—Dr. K. S.
Singh (Labour, Employment and Krishnaswamy.
Social Welfare), M. S. Thacker *Jt. Secretaries*—Ameer Raza, K. A.
(Natural Resources), V. K. R. V. P. Stevenson, D. P. Singh and
Rao (Food and Agriculture, Com- M. Butt.
munity Development and Co- *Chief (Perspective Planning) and*
operation Projects) and S. G. P. S. to *Chairman*—Pitambar
Barve (Industry). Pant.
Secretary—G. R. Kamat. *Chief (Labour & Employment)*—
Addl. Secy.—Asoka Mitra. B. N. Datar.
Advisers (Programme Administra- Chief (Programme Administration)
tion) & ex-officio *Addl. Secre- —K. Mitra.*
taries—Dr. S. R. Sen, P. P. I. *Chief (Metals)*—Dr. D. Swarup.
Vaidyanathan and M. R. Yardi. *Chief (Irrigation)*—K. D. Sanwal.
Adviser (Industry & Minerals) and Chief (Power)—M. K. Gopaliengar.
ex-officio *Addl. Secretary*—Dr. A. *Chief (Agri.)*—Ram Surat Singh.
Nagaraja Rao. *Chief (—)*—Dr. V. Nath.
Adviser (Education)—Dr. A. C. *Senior Specialists*—Dr. S. P. Roy
Joshi. Choudhury, Dr. A. K. Dey, K.
Adviser (Resources)—A. B. Guha. P. Sagreiya and D. P. Nayyar.
Adviser (Spl. Agricultural Program- Dy. Secretaries—N. S. Gidwani,
Pravakar Sen and S. D. Chatterjee.

SUPREME COURT OF INDIA

Chief Justice—P. B. Gajendragadkar. *Registrar*—Y. D. Desai.
Judges—A. K. Sarkar, K. Subba Rao, *Deputy Registrars*—Guru Datta and
 K. N. Wanchoo, M. Hidayat- C. M. Rao.
 ullah, J. C. Shah, J. R. Mudholkar, *Editor, Supreme Court Reports*—
 S. M. Sikri, R. S. Bachawat, V. K. B. Nambyar.
 Ramaswamy and P. Satyanarayana
 Raju.

UNIVERSITY GRANTS COMMISSION

Chairman—Dr. D. S. Kothari. Das, A. R. Wadia, P. N. Kirpal,
Members—Pt. H. N. Kunzru, B. Dr. D. S. Reddi and Dr. T. P.
 Shiva Rao, D. C. Pavate, S. R. Singh, Ali Yavar Jung.

BOARD OF TRADE

Members: S. L. Kirloskar.
 G. D. Birla. Dr. A. Ramaswami Mudaliar.
 Khandubhai Desai. Raja Surender Singh of Nalagarh.

UNION PUBLIC SERVICE COMMISSION

Chairman—B. N. Jha. *Members*—Batuk Singh, N. L.
Secretary—Rajendra Lal. Ahmed, Sm. B. Khongmen, Desraj
Controller of Examinations—Harish Mehta, Dr. A. Appadorai, M. S.
 Chandra. Doraiswami.

STATE MINISTRIES

ANDHRA PRADESH

Ministers

K. Brahmananda Reddi (*Chief Minister*)—General Administration, Planning, Major Industries and Elections, Electricity etc.
 N. Ramachandra Reddy—Revenue.
 Dr. M. Chenna Reddy—Finance & Industries.
 T. Ramaswamy—Co-operation and Fisheries.
 Dr. M. N. Lakshminarasiah—Panchayati Raj, Accommodation and Housing.
 A. C. Subba Reddy—Irrigation, Food, Agriculture and Animal Husbandry.
 Mir Ahmed Ali Khan—Home.
 Y. Sivarama Prasad—Health.
 P. V. G. Raju—Without Portfolio.
 T. V. Raghavalu—Highways and Buildings.

Ministers of State

- Sm. T. N. Sadalakshmi—Social Welfare.
A. Balarami Reddi—Education.
N. C. Rama Naidu—Municipal Administration and Forests.
M. R. Appa Rao—Excise and Prohibition and Cultural Affairs.
B. V. Gurumurthy—Labour & Transport.
P. V. Narasimha Rao—Law, Prisons, Religious and Charitable Endowments.

ASSAM

Ministers

- Bimala Prasad Chaliha (*Chief Minister*)—Appointments, Home, Political, General Administration, Secretariat Administration, Minority Affairs, Information & Publicity, P.W.D., etc.
Vacant—Finance, Law, Panchayats & Community Projects and Wakf Property.
Kamakhya Prasad Tripathi—Power, Mines & Minerals, Industries, Planning & Development, Labour, Statistics, etc.
Siddhinath Sharma—Revenue, Forests, Transport, etc.
Deva Kanta Barooah—Education, Co-operation & Tourism.
Baidyanath Mookerjee—Medical, Excise, Printing & Stationery.
Moinul Haque Choudhury—Agriculture, Irrigation & Flood Control, Veterinary, Fisheries, Livestock, Parliamentary Affairs, etc.
Rupnath Brahma—Supply, Trade & Commerce, Relief & Rehabilitation and Registration & Stamps.

- Mahendra Nath Hazarika—Khadi & Village Industries, Sericulture and Weaving and Jails.
Chatrasing Teron—Tribal Areas & Welfare of Backward Classes, Social Welfare, Soil Conservation.

Ministers of State

- Girindra Nath Gogoi—P.W.D.
Radhika Ram Das—Revenue.
Emonsing Sangma—Community Projects, Tribal Welfare, Power.

Deputy Ministers

- Lalit Kumar Doley—Tribal Welfare, Co-operation, Forests.
Sm. Komol Kumari Barua—Education & Social Welfare.
Devendra Nath Hazarika—Panchayats and Community Projects.

BIHAR

Ministers

- Krishna Ballabh Sahay (*Chief Minister*)—Appointments, Political, Industries & Labour, Finance, Planning and Forests.
Satyendra Narayan Sinha—Education, Agriculture & Local Self-Government.
Mahesh Prasad Sinha—River Valley Projects, Irrigation and Power.
Bir Chand Patel—Land Revenue.
Abdul Qaiyum Ansari—Health & Jails.
Hari Nath Mishra—Co-operation.
Ram Lakhan Singh Yadav—P.W.D., P.H.E.D. and Home Guards.
Jafar Imam—Law & Excise.
Mungeri Lal—Food, Supply, Commerce & Animal Husbandry.
Sushil K. Bage—Community Development & Gram Panchayat.
Sm. Sumitra Devi—Information and Family Planning.

Ministers of State

- Ambika Saran Singh—Finance & Taxation, Audit, Statistics, National Savings.
 Dumar Lal Baitha—Housing and Welfare.
 Girish Tiwari—Education.
 Nawal Kishore Prasad Sinha—General Administration & Jails.
 Sahdeo Mahato—River Valley Projects, Irrigation & Power, Law, Excise.
 Bariar Hembrome—Welfare (Scheduled Tribes).
 Raghvendra Narain Singh—Transport.
 Sheo Shankar Singh—Religious Trust.
 Baleshwar Ram—Tourism.

GUJARAT**Ministers**

- Hitendra Kanaiyalal Desai—(*Chief Minister*)—General Administration, Planning, Home, Information, Law & Judiciary.
 Sm. Indumati Chimanlal—Education, Social Welfare, Prohibition & Excise, Rehabilitation, Sports & Cultural Activities.
 Vijay Kumar Madhavlal Trivedi—Public Works, Ports, Civil Supplies, Electricity.
 Utsavbhai S. Parikh—Revenue, Agriculture, Industries.
 Mohanlal Popatlal Vyas—Health, Labour, Housing.
 Vajubhai Manilal Shah—Panchayats, Community Projects, Co-operation, Sarvodaya, Municipalities, Road Transport, Jails.
 Maldevji M. Odedra—Finance, Forests, Fisheries, Govt. Printing, Gold Control, etc.

Deputy Ministers

- Bahadurbhai Kunthabhai Patel—P.W.D., Ports, Tourism.
 Sm. Urmilaben P. Bhatt—Health, Jails, Social Welfare, Housing.
 Devendra Motibhai Desai—Panchayats, Community Projects, Sarvodaya, Co-operation, Industries, Municipalities.
 Madhavsinh Fulsinh Solanki—Revenue, Home, Planning, Law, Judiciary.
 Bhanuprasad Valjibhai Pandya—Education, Prohibition & Excise, Sports.
 Jayaram Anand Patel—Agriculture, Irrigation, Electricity, Civil Supplies.

JAMMU & KASHMIR**Ministers**

- G. M. Sadiq (*Chief Minister*)—General Administration, Cabinet Work, Civil Secretariat, Education, Technical Training, Libraries, Culture & Languages, Planning & Statistics, Research & Publication, Youth Welfare and Sports, etc.
 Ali Mohd. Tariq—Minister of State for Information & Publicity, Tourism, Printing & Stationery.
 Kaushak Bakula—Minister of State for Ladakh Affairs and Trade Commission and Trade Agencies.
 Harbans Singh Azad—Minister of State for Food and Agriculture, Horticulture, Animal Husbandry, Co-operation, Community Development, etc.
 G. L. Dogra (*Finance and Industries Minister*)—Finance & Banking, Law & Judiciary, Excise & Taxation, Insurance, etc.

Major Piar Singh—Minister of State for Industries & Commerce, Mining, Labour Administration & Employment Exchanges, etc.

D. P. Dhar—Minister for Home and Public Works, Law, Police, Forests, Fisheries, Housing, etc.

Ghulam Rasul Kar—Minister of State for Works and Power, Irrigation & Flood Control, etc.

Mohd. Ayub Khan—Minister for Revenue and Transport, Relief & Rehabilitation, Charitable & Religious Endowments, etc.

Pir Gyas-ud-din—Minister for Health & Local Self-Govt., Jails, Social Welfare, etc.

Trilochan Dutt—*Without Portfolio*.

KERALA

President's Rule

MADHYA PRADESH

Ministers

Pt. Dwarka Prasad Mishra (*Chief Minister*)—General Administration, Home and Publicity etc.

Pt. Shambhunath Shukla—Finance.

Dr. Shankar Dayal Sharma—Industry & Commerce.

Mishri Lal Gangwal—Planning & Development.

Raja Naresh Chandra Singh—Tribal Welfare.

Ganesh Ram Anant—Public Health.

Rani Padmavati Devi—Local Govt.

Narsingh Rao Dixit—Education.

Govind Narain Singh—Social Welfare.

Gulsher Ahmed—Law.

Gautam Sharma—Food, Civil Supplies, Co-operation.

Ministers of State

Sajjan Singh Vishnar—Electricity.

Vasandrao Wickey—Forests.

Arjun Singh—Agriculture.

Kunj Behari Lal Guru—Revenue.

Parmanand Bhai Patel—Works.

Rameshwar Prasad Sharma—Irrigation.

Vedram—Jails.

Shyam Sunder Patidar—Labour.

MADRAS

Ministers

M. Bhaktavatsalam (*Chief Minister*)—General Administration, Establishments, Planning, Finance, Education, Labour, Legislature, Election, Religious Endowments.

R. Venkataraman—Industries, Electricity, Housing, Mines & Minerals, Law, Transport, etc.

P. Kakkan—Police, Agriculture, Animal Husbandry, Prohibition, Housing, etc.

V. Ramaiah—Public Works, Revenue, Food, Electricity, Refugees,

Sm. Jothi Venkatachellum—Public Health, Women's & Children's Welfare, etc.

N. N. S. Manradiar—Co-operation, Ports, Forests, Mines & Minerals, Companies, Khadi & Village Industries, etc.

G. Bhuvarahan—Information & Publicity, Registration, Printing & Stationery, Fisheries, etc.

S. M. Abdul Majid—Local Administration, Municipal Administration, Community Development & Panchayats.

MAHARASHTRA**Ministers**

- Vasantrao Phulsing Naik (*Chief Minister*)—General Administration, Planning, Industries & Electricity.
- Daulatrao Shripatrao Desai—Home.
- Gopalrao Bajirao Khedkar—Rural Development.
- Parsharam Krishnaji Savant—Agriculture, Food & Civil Supplies.
- Shantilal Harjivan Shah—Public Health, Law & Judiciary.
- Sheshrao Krishnarao Wankhede—Finance.
- Shankarrao Bhaurao Chavan—Irrigation & Power, Buildings & Communications.
- Homi J. Taleyarkhan—Housing, Fisheries & Tourism.
- Sm. Nirmala Rajee V. Bhosle—Social Welfare.
- Madhukarrao Dhanaji Choudhari—Education & Forests.
- Keshavrao Sitaram Sonwane—Co-operation.
- Narendra Mahipati Tidke—Labour.
- Shankarrao Vithalrao Sonawane—Prohibition.
- Dr. Rafiq Zakaria—Urban Development and Waqfs.
- Rajaram Anant Patil—Revenue.

Deputy Ministers

- G. D. Patil—Planning, Industries & Electricity.
- Dr. Kailas Shivnarayan—Education.
- Y. J. Mohite—Agriculture.
- M. A. Vairale—Irrigation & Power, Buildings & Communications.
- H. G. Vartak—Public Health, Fisheries, etc.
- B. J. Khatal—Co-operation, Food & Civil Supplies.

- K. P. Patil—Home & Labour.
- D. S. Jagtap—Rural & Urban Dev. & Legislative Affairs.
- D. N. Padvi—Social Welfare, Housing & Forests.
- S. B. Patil—Revenue.

MYSORE**Ministers**

- S. Nijalingappa (*Chief Minister*)—Law.
- S. R. Kanthi—Education.
- B. D. Jatti—Food.
- M. V. Krishnappa—Revenue.
- M. V. Rama Rao—Home.
- R. M. Patil—Development, Panchyati Raj & Municipal Administration.
- K. Mallappa—Industries and Commerce.
- Dr. K. Nagappa Alva—Health.
- Veerendra Patil—Public Works.
- B. Rachiah—Forests and Fisheries.
- Ramakrishna Hegde—Finance.
- K. Puttaswamy—Co-operation & Housing.
- D. Devaraja Urs—Transport & Tourism.
- G. Narayana Gowda—Agriculture.

Deputy Ministers

- H. R. Abdul Gaffar—Finance.
- Grace Tucker—Education.
- Y. Ramachandra—Municipal Administration, Development & Panchayati Raj.
- Kondajji Basappa—Information & Excise.
- Alur Hanumanthappa—Minor Irrigation.
- R. Dayananda Sagar—Sericulture.
- Maqsood Ali Khan—Mines and Geology.
- K. Prabhakar—Social Welfare.
- M. Mallikarjunaswamy—Health.

NAGALAND

Ministers

- P. Shilu Ao (*Chief Minister*)—
Home, Appointments, Political,
Planning and Co-ordination,
Secretariat Admn., Revenue, etc.
Hokishe Sema—Finance, P.W.D.
(Roads & Buildings).
Jasokie—Supply & Transport,
Forests, Relief & Rehabilitation.
R. C. Chiten Jamir—Agriculture,
Veterinary and Animal Husbandry,
Registration & Co-operation,
Fisheries, Industries & Commerce,
Law & Parliamentary Affairs.
Akum Imlong—Tuensang Affairs,
Publicity & Information.
Mohondemo Kithan—Education,
Town Planning, etc.
Lhuthipru Vasa—Medical & Public
Health, Community Development.

Deputy Minister

- N. L. Odyuo—Tribal Areas, Co-
ordination, Electricity, Excise and
Jails.

ORISSA

Ministers

- Sadasiva Tripathy—(*Chief Minister*)
—Finance, Industries, Planning &
Co-ordination, Irrigation and
Power, Commerce, Co-operation
& Forestry (Forestry), Commu-
nity Development & Panchayati
Raj, Mining & Geology, etc.
Nilamani Routray—Home, Supply,
Labour, Employment & Housing.
Satyapriya Mohanty—Education,
Works & Transport.
Dr. P. V. Jagannath Rao—Health.
Toyaka Sanganna—Tribal & Rural
Welfare, Excise & Revenue.
Banamali Babu—Law, Health
(L.S.G.).

- Ram Prasad Mishra—Agriculture &
Animal Husbandry, Co-operation
& Forestry (excluding Forestry).

Deputy Ministers

- Prahlad Malik—Irrigation &
Power, Revenue, Planning & Co-
ordination.
Sm. Saraswati Pradhan—Education.
Santosh Kumar Sahu—Cultural
Affairs, Mining & Geology, Co-
operation & Forestry.
Chandra Mohan Singh—Labour,
Home (Jails), Employment &
Housing.
Chittaranjan Naik—Secretary of
Commerce.
Anup Singh Deo—Transport,
Home (Public Relations).
Madan Mohan Pradhan—Agricul-
ture & Animal Husbandry.

PUNJAB

Ministers

- Ram Kishen (*Chief Minister*)—
General Administration, Public
Relations, Industries, Food &
Civil Supplies.
Darbara Singh—Home, Agriculture,
Community Development.
Probodh Chandra—Education,
Languages.
Kapoor Singh—Finance, Taxation
and Small Savings.
Gurdial Singh Dhillon—Transport,
Rural Electrification, Elections &
Parliamentary Affairs.
Ranbir Singh—P.W.D. (Buildings
& Roads) and Public Health
Engineering, etc.
Ajmer Singh—Planning, Statistics,
Local Government, Sports, etc.
Harinder Singh—Revenue, Relief &
Rehabilitation.

Rizaq Ram—Irrigation and Power,
Co-operation & Labour.

Prem Singh Prem—Capital Project
& Architecture, Town & Country
Planning, Housing.

Chand Ram—Welfare, Justice &
Jails, Forests.

Sm. Om Prabha Jain—Health,
Tourism, Cultural Affairs, etc.

Ministers of State

Sunder Singh—Printing & Sta-
tionery, Labour, Excise, Industrial
Co-operatives & Welfare.

Capt. Rattan Singh—Animal Hus-
bandry, Dairying, Fisheries, Agri-
culture.

Deputy Ministers

Sm. Chandravati—Food & Civil
Supplies, Cultural Affairs and
Tourism, etc.

Gurmeet Singh—Community Deve-
lopment & Panchayats, Irrigation
& Power.

Gian Chand—Industries and Deve-
lopment of Hill Areas.

Pratap Garg—Chief Parliamentary
Secy., Public Relations & Parlia-
mentary Affairs.

RAJASTHAN

Ministers

Mohan Lal Sukhadia (*Chief Minis-
ter*)—General Administration,
Home, Political, Appointment.

Mathuradass Mathur—Planning,
Statistics, Co-operation, Transport,
Jails, Printing Press, etc.

Nathuram Mirdha—Agriculture,
Food, Animal Husbandry, Irriga-
tion.

Maharaja Rana Harish Chandra—
P.W.D., Power, Industries & Civil
Supplies.

Bal Krishna Kaul—Finance &
Taxation.

Bheeka Bhai—Forests, Labour, etc.

Barkat Ullah Khan—Law, Judiciary,
Local Self-Govt., Housing,
Tourism, Waqfs, etc.

Kumbha Ram Arya—Revenue,
Colonization, Famine Relief.

Damodar Lal Vyas—Community
Development & Panchayati Raj,
Medical & Health, Excise, etc.

Haridev Joshi—Mines, Publicity,
Public Health, Elections, etc.

Brij Sunder Sharma—Education, etc.

Amrit Lal Yadav—Social Welfare,
Relief & Rehabilitation, etc.

Deputy Ministers

Daulat Ram—Major Irrigation etc.

Sm. Kamla Baniwal—Planning,
Finance, Food, Famine Relief, etc.

Sm. Prabha Misra—Medical, Public
Health, Social Welfare, Law, etc.

Vacant—P.W.D., Community Deve-
lopment & Panchayats, Labour,
Forests, etc.

Paras Ram Maderna—Excise &
Taxation, Civil Defence, Relief &
Rehabilitation, Housing, Judicial.

Ram Prasad Ladha—Revenue,
Mines, etc.

Chandan Mal Baid—Industries,
Power, Civil Supplies, etc.

Dinesh Rai Dangi—Medium &
Minor Irrigation, Small Savings,
Khadi & Village Industries.

Niranjan Nath Acharya—Education
& Home.

Bhim Singh—Agriculture, Animal
Husbandry, Co-operation, Trans-
port.

UTTAR PRADESH

Ministers

Sm. Sucheta Kripalani (*Chief Minister*)—General Administration, Industries, Planning, Information, Statistics, etc.
Hukum Singh Visen—Revenue.
Girdhari Lal—Irrigation and Power.
Charan Singh—Forests.
Syed Ali Zaheer—Judicial.
Hargovind Singh—Home, Jails.
Muzaffar Hasan—Transport.
Ram Murti—Community Development & Panchayati Raj.
Jagmohan Singh Negi—Food and Civil Supplies.
Dr. Sita Ram—Social Welfare, Relief & Rehabilitation, etc.
Dau Dayal Khanna—Medical, Public Health and Excise.
Banarsi Das—Co-operation, Labour and Parliamentary Affairs.
Kailash Prakash—Education & Finance.
Jagan Prasad Rawat—Public Works.
Genda Singh—Agriculture.

WEST BENGAL

Ministers

P. C. Sen (*Chief Minister*)—General Administration, Political, Police, Defence, Home (Spl. Branches), Food and Supplies, Agriculture & Community Development, Planning, etc.
Iswar Das Jalan—Excise, Judicial & Legislative Affairs.
K. N. Dasgupta—P.W.D. and Housing.
Rabindra Lal Sinha—Education.
Tarun Kanti Ghosh—Commerce & Industries, Forests, Co-operation, Cottage & Small-Scale Industries.

Sm. Purabi Mukherjee—Health & Small Savings Branch of Finance Dept.

Shyamadas Bhattacharyya—Land & Land Revenue, Irrigation & Waterways.

Jagannath Kolay—Parliamentary Affairs, Jails & Home (Press & Passport).

Saila Mukherjee—Finance & Home (Transport).

Sm. Abha Maiti—Refugee Relief & Rehabilitation, Social Welfare & Home (Constitution & Elections).

S. M. Fazlur Rahman—Animal Husbandry & Veterinary Services, Fisheries & Local Self-Govt.

Bijoy Singh Nahar—Labour, Information & Public Relations.

Ministers of State

Sourindra Mohan Misra—Education & Panchayats.

Tenzing Wangdi—Tribal Welfare, Co-operation, Animal Husbandry, Fisheries, etc.

Smarajit Banerjee—Community Development & Agriculture.

Ardhendu Sekhar Naskar—Excise, Home (Police & Defence), Commerce & Industries, Cottage & Small-Scale Industries.

GOA, DAMAN & DIU

Ministers

Dayanand B. Bhandodkar (*Chief Minister*)—General Administration, Special, Home, Planning & Development.

Shrirang Karmali—Information & Tourism, Education, Public Health & Public Works.

Tony Fernandes—Law, Industries, Labour & Agriculture.

HIMACHAL PRADESH**Ministers**

Dr. Y. S. Parmar (*Chief Minister*)
—General Administration, Home & Vigilance, Planning, Education & Welfare, P.W.D. & Power, Public Relations & Tourism, Co-operation & Panchayats, Agriculture & Animal Husbandry.

Karam Singh (*Revenue Minister*)—Revenue, Finance, Excise & Taxation, Law, Local Self-Govt., Elections, Medical & Public Health.

Hari Das (*Development Minister*)—Development, Industries, Transport, Forests and Civil Supplies.

MANIPUR**Ministers**

M. Koireng Singh (*Chief Minister*).
Seram Angou Singh—Development.
S. Bijoy Singh—Dy. Minister (Works).

Pauneikhai—Dy. Minister (Tribal Welfare).

PONDICHERRY**Ministers**

V. Venkatasubba Reddiar (*Chief Minister*).

A. S. Kangeyan—Finance.

P. Shammugham—Development.

V. M. C. Varada Pillai—Labour & Welfare.

TRIPURA**Ministers**

Sachindra Lal Singh (*Chief Minister*)—Home, Political, Revenue, Food etc.

Sukhomoy Sengupta—Development.

Deputy Ministers

Raj Prasad Choudhury.

Benode Behari Das.

Manindra Lal Bhowmick.

RAJYA SABHA**ANDHRA PRADESH (18)**

Damodaram Sanjivayya

Km. Mary Naidu

Yerrapureddi Adinarayana Reddy

Yella Reddy

Narla Venkateswara Rao

Smt. Seeta Yudhvir

Makineni Basavapunnaiiah

Akbar Ali Khan

K. L. Narasimha Rao

Kota Punnaiah

B. Ramakrishna Rao

J. C. Nagi Reddi

V. C. Kesava Rao

P. K. Kumaran

Smt. C. Ammannappa Raja

N. Narotham Reddy

K. V. Raghunatha Reddy

Kasu Vengala Reddy

ASSAM (7)

Purnananda Chetia

A. Thanglura

Lila Dhar Barooah

Smt. Bedavati Buragohain

S. C. Deb

Baharul Islam

Robindra Nath Kakati

BIHAR (22)

A. Mahamad Chaudhury

Anand Chand

Smt. Jahanara Jaipal Singh

R. P. Jain

Awadheshwar Prasad Sinha

Braja Kishore Prasad Sinha

Rama Bahadur Sinha

Shishir Kumar

Smt. Lakshmi N. Menon

Pratul Chandra Mitra

Mahesh Saran

Shyamnandan Mishra

R. P. N. Sinha

Rajendra Pratap Sinha

L. N. Mishra

Mahabir Dass

Dhirendra Chandra Mallik

Mohan Singh Oberoi

Jagat Kishore Prasad Narayan Singh

Ganga Sharan Sinha

Syed Mahmud

Bipin Behary Varma

GUJARAT (11)

Maniben V. Patel

Khandubhai K. Desai

G. H. V. Momin

Dahyabhai V. Patel

K. S. Chavda

Suresh J. Desai

Jethalal Harikrishna Joshi

Mahipat Mulshankar Mehta

Jaisukhlal Lalshanker Hathi

Maganbhai Shankarbhai Patel

Maneklal Chunilal Shah

JAMMU AND KASHMIR (4)

O. P. Mehta

Gulam Mohammed

Krishan Dutt

Ali Mohamad Tariq

KERALA (9)

Govindan Nair

Kizhedath Damodaran

S. M. Sait

Joseph Mathen

K. Madhava Menon

Ebrahim Sulaiman Sait

Smt. Devaki Gopidas

Palat Kunhi Koya

M. N. Govindan Nair

MADHYA PRADESH (16)

B. P. Vinayakrao

Dayaldas Kurre

Khub Chand Baghel

Vacant

P. C. Sethi

Niranjan Singh

Gurudev Gupta

R. K. Malviya

A. D. Mani

Bhanu Pratap Singh

Gopikrishna Vijaivargiya

Vimalkumar Mannalalji Chordia

R. S. Khandekar

Laxmi Narayan Das

Ram Sahai

Syed Ahmad

MADRAS (18)

A. K. A. Abdul Samad

Anandan

S. Chandrasekhar

S. S. Mariswamy

Mrs. Lalitha Rajagopalan

S. S. Vassan

N. M. Anwar

N. Rama Krishna Iyer

Smt. G. Parthasarathy

T. S. Pattabiraman

P. Ramamurti

T. Chengalvaroyan

C. N. Annadurai

M. J. Jamal Moideen

M. A. Manickavelu Naicker

J. Sivashanmugam Pillai

K. S. Ramaswamy

M. Ruthnasamy

MAHARASHTRA (19)

Abidali Jaferbhai
 Babubhai M. Chinai
 Udhavrao Sahebrao
 Sadashiv Krishna
 M. M. Dharia
 S. B. Bobade
 Dajiba Balwantrao Desai
 Shripad Krishna Limaye
 Deokinandan Narayan
 Vithalrao Tukaram Nagpure
 M. C. Chagla
 Baba Saheb Savnekar
 Kodardas Kalidas Shah
 Bhaurao Krishnarao Gaikwad
 Bidesh Tukaram Kulkarni
 Pandharinath Sitaram Patil
 Dhairyashilrao Yashwantrao Pawar
 Smt. Tara Ramchandra Sathe
 Ganpatrao Devji Tapase

MYSORE (12)

Mulka Govinda Reddy
 Sherkhan
 C. M. Poonacha
 Smt. Annapurna Devi Thimmareddy
 Smt. Violet Alva
 M. S. Gurupada Swamy
 B. C. Nanjundaiya
 N. Sri Rama Reddy
 D. P. Karmarkar
 Patil Puttappa
 M. Govinda Reddy
 J. Venkatappa

NAGALAND (1)

Melhupra Vero

ORISSA (10)

B. K. Mahanti
 Narayan Patra
 Sradhakar Supakar
 Nanda Kishore Das
 Bairagi Dwibedy

Lokanath Misra
 Bhabhani Charan Pattanayak
 Manmathnath Misra
 Sundarmani Patel
 Smt. Nandini Satpathy

PUNJAB (11)

Anup Singh
 Jagat Narain
 Smt. M. Kaur
 Uttam Singh
 Bansilal
 Neki Ram
 Raghubir Singh Panjhzari
 Mohan Singh
 Abdul Ghani
 Chaman Lall
 Surjit Singh Atwal

RAJASTHAN (10)

Sadiq Ali
 D. V. Singh
 Shanti Lal
 Kumbha Ram
Vacant.
 Smt. Sharda Bhargava
 Abdul Shakoor
 P. N. Kathju
 Sawai Man Singh
 Ramesh Chandra

UTTAR PRADESH (34)

Dattopant Thengari
 Faridul Haq Ansari
 Mahabir Prasad (of Allahabad)
 Bashir Husain Zaidi
 Umashankar Dikshit
 A. C. Gilbert
 Ram Singh
 T. N. Singh
 Smt. Sarla Devi
 Mahabir Prasad (of Agra)
 Sham Sundar Narain Tankha
 Arjun Arora

Bhagwat Narayan Bhargava
 Jogesh Chandra Chatterji
 Ramgopal Gupta
 Nafisul Hasan
 Piare Lall Kureel
 Mukut Behari Lal
 G. S. Pathak
 Jogendra Singh
 M. R. Shervani
 Hira Vallabha Tripathi
 Smt. Anis Kidwai
 Lila Dhar Asthana
 Chandra Shekhar
 Dharam Prakash
 Mohammad Ibrahim
 Sitaram Jaipuria
 Gaure Murahari
 Smt. Shyam Kumari Khan
 C. D. Pande
 P. N. Sapru
 M. M. S. Siddhu
 Atal Behari Vajpayee

WEST BENGAL (16)

Dharam Chand Sarawgi
 D. L. Sen Gupta
 Smt. Phulrenu Guha
 Bhupesh Gupta
 Muhammad Ishque
 Rajpat Singh Doogar
 Sudhir Ghosh
 Nikunja Behari Maiti
 Biren Roy
 Mriganka Mohan Sur
 Nausher Ali

Surendra Mohan Ghose
 Niren Ghosh
 Debabroto Mukherjee
 Ramprasanna Ray
 R. K. Bhuwalka

DELHI (3)

I. K. Gujral
 Kumari Shanta Vasisht
 Santokh Singh

HIMACHAL PRADESH (2)

Chiranji Lal
 Shiva Nand Ramaul

MANIPUR (1)

L. Lalit Madhob Sharma

PONDICHERRY (1)

P. Abraham

Tarit Mohan Dasgupta

NOMINATED BY PRESIDENT

Jairamdas Daulatram
 G. Ramachandran
 Smt. Shakuntala Paranjpye
 Tara Shankar Banerjee
 Satyavrata Siddhantalankar
 M. Satyanarayana
 A. R. Wadia
 R. R. Diwakar
 Gopal Singh
 Tara Chand
Vacant.

LOK SABHA

ANDHRA PRADESH (43)

<i>Constituency</i>	<i>Name of Member</i>	<i>Party*</i>
Adilabad	G. Narayan Reddy	Con.
Adoni	Pendekanti Venkatasubbaiah	Con.
Amalapuram (R)	Bayya Suryanarayana Murthy	Con.
Anakapalli	Missula Suryanarayana murty	Con.
Anantapur	Osman Ali Khan	Con.
Channur	N. Yethiraja Rao	Con.
Cheepurupalli	R. V. Gopalkrishna Rangarao	Con.
Chittoor	N. G. Ranga	Swa
Cuddapah	Yeddula Eswara Reddy	CPI
Eluru	Smt. V. Vimala Devi	CPI
Gadwal	J. Rameshwar Rao	Con.
Gudivada	Maganti Ankineedu	Con.
Guntur	Kotha Raghuramaiah	Con.
Hindupur	K. V. Ramakrishna Reddy	Con.
Hyderabad	Gopal S. Melkote	Con.
Kakinada	M. Thirumala Rao	Con.
Karimnagar	A. Kishan Reddi	Con.
Kavali	B. Gopala Reddi	Con.
Khammam	Smt. T. Lakshmi Kantamma	Con.
Kurnool	Smt. Yashoda Reddy	Con.

The abbreviations used are: Indian National Congress (Con); Praja Socialist Party (PSP); Communist Party of India (CPI); Bharatiya Jan Sangh (JS); Socialist Party (SP); Swatantra Party (Swa); Akhil Bharat Hindu Mahasabha (HM); Akhil Bharatiya Ram Rajya Parishad (RRP); Republican Party of India (RPI); Jharkhand Party (JP); Indian Union Muslim League (ML); Dravida Munnetra Kazhagam (DMK); All India Forward Bloc (FB); Independent (Ind); Revolutionary Socialist Party (RSP), Maha Gujarat Janta Parishad (MGJP); Hill Leaders' Conference (HLC); Lok Sevak Sangh (LSS); Gantantra Parishad (GP); Akali Dal (AD); Haryana Lok Samiti (HLS); National Conference (NC); and Maharashtratravadi Gomantak (MG).

(R)—Indicates *Reserved*.

<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
Mahbubabad	R. Surender Reddi	Con.
Mahbubnagar (R)	J. B. Muthyal Rao	Con.
Markapur	Gujjala Yallamanda Reddy	CPI
Masulipatnam	Mandala Venkataswamy	Ind.†
Medak	P. Hanmanth Rao	Con.
Miryalguda (R)	Laxmi Das	CPI
Nalgonda	Ravi Narayan Reddy	CPI
Narasapur	Datla Balarama Raju	Con.
Narasipatnam (R)	Matcharasa Matcharaju	Con.
Nellore (R)	B. Anjanappa	Con.
Nizamabad	H. C. Heda	Con.
Ongole	Madala Narayana Swamy	CPI
Parvathipuram (R)	Biddika Satyanarayana	Con.
Peddapalli (R)	M. R. Krishna	Con.
Rajahmundry	Datla Satyanarayana Raju	Con.
Rajampet	C. L. Narasimha Reddy	Swa
Ramachandrapuram	N. Satyanarayana Rao	Con.
Secunderabad	<i>Vacant.</i>	
Srikakulam	B. Rajagopala Rao	Con.
Tenali	Kolla Venkaiah	CPI
Tirupati (R)	C. Dass	Con.
Vicarabad	Smt. Sangam Laxmi Bai	Con.
Vijayawada	K. L. Rao	Con.
Visakhapatnam	<i>Vacant</i>	
Warangal	Bakar Ali Mirza	Con.

ASSAM (12)

Autonomous Dists.(R)	G. Gilbert Swell	HLC
Barpeta	Smt. Renuka Devi Barkataki	Con.
Cachar	Smt. Jyotsna Chanda	Con.
Darrang	Bijoy Chandra Bhagavati	Con.
Dhubri	Ghyasuddin Ahmed	Con.
Dibrugarh	Jogendra Nath Hazarika	Con.
Gauhati	Hem Barua	PSP
Goalpara (R)	Dharanidhar Basumatari	Con.
Jorhat	Rajendra Nath Baruah	PSP
Karimganj (R)	Nihar Ranjan Laskar	Con.
Nowgong	Liladhar Kotoki	Con.
Sibsagar	Prafulla Chandra Borooah	Con.

† Since joined the C.P.I.

BIHAR (53)

<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
Aurangabad	Smt. Lalita Rajya Laxmi	Swa
Bagaha	Kamal Nath Tiwari	Con.
Banka	Smt. Shakuntala Devi	Con.
Barh	Smt. Tarakeshwari Sinha	Con.
Begusarai	Mathura Prasad Mishra	Con.
Bettiah (R)	Bhola Raut	Con.
Bhagalpur	Bhagwat Jha Azad	Con.
Bikramganj	Ram Subhag Singh	Con.
Buxar	Anant Prasad Sharma	Con.
Chapra	Ram Shekhar Prasad Singh	Con.
Chatra	Smt. Vijaya Raje	Swa
Darbhanga (R)	Shree Narain Das	Con.
Dhanbad	P. R. Chakraverti	Con.
Dumka (R)	Satya Charan Besra	Con.
Gaya	Brajeshwar Prasad	Con.
Giridih	Bateshwar Singh	Swa
Godda	Prabhudayal Himatsingka	Con.
Gopalganj	Dwarka Nath Tiwari	Con.
Hajipur	Rajeshwar Patel	Con.
Hazaribagh	Basant Narain Singh	Swa
Jahanabad	Smt. Satyabhama Devi	Con.
Jainagar	Yamuna Prasad Mandal	Con.
Jamshedpur	Udai Kar Misra	CPI
Jamui (R)	Nayantara Das	Con.
Katihar	Priya Gupta	PSP
Kesaria	Bhishma Prasad Yadava	Con.
Khagaria	Jialal Mandal	Con.
Kishanganj	Mohammed Tahir	Con.
Lohardaga (R)	David Munzni	Swa*
Madhubani	Yogendra Jha	PSP
Maharajganj	Krishna Kant Singh	Con.
Mahua (R)	Chandramani Lal Chaudhary	Con.
Monghyr	Banarsi Prasad Sinha	Con.
Motihari	Bibhuti Mishra	Con.
Muzaffarpur	Digvijay Narain Singh	Con.
Nalanda	Sidheshwar Prasad	Con.
Nawada (R)	Ram Dhani Das	Con.
Palamau	Smt. Shashank Manjari	Swa

* Since joined the Congress Party.

<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
Patna	Smt. Ramdulari Devi	Con.
Pupri	Sashi Ranjan Prasad Sah	Con.
Purnea	Phani Gopal Sen	Con.
Rajmahal (R)	Iswar Marandi	JP
Ranchi East	Prashanta Kumar Ghosh	Swa
Ranchi West (R)	Jaipal Singh	JP
Rosera (R)	Rameshwar Sahu	Con.
Saharsa	Bhupendra Narayan Mandal	SP
Samastipur	Satya Narayan Sinha	Con.
Sasaram (R)	Jagjivan Ram	Con.
Shahabad	Baliram Bhagat	Con.
Singhbhum (R)	Hari Charan Soy	JP
Sitamarhi	Nagendra Prasad Yadav	Con.
Siwan	Mohd. Yusuf	Con.
Sonbarsa (R)	Tulmohan Ram	Con.

GUJARAT (22)

Ahmedabad	Indulal Kanaiyalal Yajnik	MGJP
Amreli	Smt. Jayaben Vajubhai Shah	Con.
Anand	Narendrasinh R. Mahida	Swa
Banaskantha	Smt. Zoharaben A. Chavda	Con.
Baroda	Fatesinhrao Pratapsinhrao Gaekwad	Con.
Bhavnagar	Jashvant Mehta	PSP
Broach	Chhotubhai Makanbhai Patel	Con.
Bulsar (R)	Nanubhai N. Patel	Con.
Dohad (R)	Parshottamdas Haribhai Bheel	Swa
Jamnagar	Manubhai M. Shah	Con.
Junagadh	Chitaranjan Rugnath Raja	Con.
Kaira	Pravinsinh N. Solanki	Swa
Kutch	Himatsinghji	Swa
Mandvi (R)	Chhaganbhai M. Kedaria	Con.
Mehsana	Mansingh Prithviraj Patel	Con.
Panchmahals	Dahyabhai Jivanji Naik	Con.
Patan	Purushotamdas R. Patel	Con.
Rajkot	M. R. Masani	Swa
Sabarkantha	Gulzarilal Nanda	Con.
Sabarmati (R)	Muldas Bhudardas Vaishya	Con.
Surat	Morarji R. Desai	Con.
Surendranagar	Ghanshyamlal Oza	Con.

JAMMU AND KASHMIR (6)**

Sham Lal Saraf	NC
Bakshi Abdur Rashid	NC

<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
—	Abdul Ghani Goni	NC
—	Gopal Dutt Mengi	NC
—	Inder Malhotra	NC
—	Nazir Hussain Samnani	NC

KERALA (18)

Ambalapuzha	P. K. Vasudevan Nair	CPI
Badagara	A. V. Raghavan	Ind.†
Chirayinkil	M. K. Kumaran	CPI
Ernakulam	A. M. Thomas	Con.
Kasergod	A. K. Gopalan	CPI
Kottayam	Mathew Maniyangadam	Con.
Kozhikode	C. H. Mohamed Koya	ML
Manjeri	Muhammad Ismail	ML
Mavelikkara (R)	R. Achuthan	Con.
Mukundapuram	P. Govinda Menon	Con.
Muvattupuzha	Cherian J. Kappen	Con.
Palghat (R)	P. V. Kunhan	CPI
Ponnani	E. Imbichibava	CPI
Quilon	N. Sreekantan Nair	RSP
Tellicherry	S. K. Pottekkatt	Ind.
Thiruvalla	Ravindra Varma	Con.
Trichur	K. K. Warior	CPI
Trivandrum	P. S. Nataraja Pillai	Ind.*

MADHYA PRADESH (36)

Balaghat	Bholaram Paradhi	PSP
Baloda Bazar (R)	Smt. Minimata A. Guru	Con.
Bastar (R)	Lakshmu Bhawani	Ind.
Bhind (R)	Suriya Prashad	Con.
Bhopal	Smt. Maimoona Sultan	Con.
Bilaspur	Chandrabhan Singh	Con.
Chhindwara	B. L. Chandak	Con.
Damoh (R)	Smt. Sahodra Bai Rai	Con.
Dewas (R)	Hukam Chand Kachwai	JS
Durg	Mohanlal Bakliwal	Con.
Guna	Ramsahai Shivprasad Pandey	Con.
Gwalior	Smt. Vijaya Raje Scindia	Con.

† Since joined the C.P.I.

** Nominated by the President.

* Since joined the Congress Party.

<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
Hoshangabad	H. V. Kamath	PSP
Indore	Homi F. Daji	Ind.†
Jabalpur	Govind Das	Con.
Jangir	Amar Singh Saigal	Con.
Jhabua (R)	Smt. Jamuna Devi	Con.
Khajuraho	Ram Sahai Tiwari	Con.
Khandwa	Mahesh Datt Misra	Con.
Khargone	Ramchandra Vithal Bade	JS
Mahasamund	Vidya Charan Shukla	Con.
Mandla (R)	M. G. Uikey	Con.
Mandsaur	U. M. Trivedi	JS
Raigarh	Vijaya Bhushan Singh Deo	RRP
Raipur (R)	Smt. Shyamkumari Devi	Con.
Rajgarh	Bhanu Prakash Singh	Ind.
Rajnandgaon	Birendra Bahadur Singh	Con.
Rewa	Shiva Datt Upadhyaya	Con.
Sagar	Jwala Prasad Jyotishi	Con.
Seoni (R)	N. M. Wadiwa	Con.
Shahdol (R)	Buddhu Singh Utiya	SP
Sidhi	Anand Chandra Joshi	Con.
Shivpuri	Vedehi Charan Parashar	Con.
Surguja (R)	Babunath Singh	Con.
Tikamgarh (R)	Kure Mate	PSP
Ujjain	Radhelal Vyas	Con.

MADRAS (41)

Aruppukkottai	Kasinatha Durai	Con.
Chidambaram	R. Kanakasabai	Con.
Chingleput	O. V. Alagesan	Con.
Coimbatore	P. R. Ramakrishnan	Con.
Cuddalore	T. D. Ramabadran	DMK
Dindigul	Smt. S. T. Soundaram Ramachandran	Con.
Erode	S. K. Paramasivan	Con.
Gobichettipalayam	P. G. Karuthiruman	Con.
Karur	R. Ramanathan Chettiar	Con.
Koilpatti (R)	S. C. Balakrishnan	Con.
Krishnagiri	K. Rajaram	DMK
Kumbakonam	C. R. Pattabhi Raman	Con.
Madras North	P. Srinivasan	Con.
Madras South	K. Manoharan	DMK

† Since joined the CPI

<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
Madurai	N. M. R. Subbaraman	Con.
Mayuram (R)	Smt. M. Chandrasekhar	Con.
Melur (R)	P. Maruthiah	Con.
Nagapattinam	Gopalasamy Thengondar	Con.
Nagercoil	A. Nesamony	Con.
Namakkal (R)	V. K. Ramaswamy	Con.
Nilgiris	Smt. Akkamma Devi	Con.
Perambalur	Era Sezhiyan	DMK
Periyakulam	M. Malaichami	Con.
Pollachi	C. Subramaniam	Con.
Pudukkottai	R. Umanath	CPI
Ramanathapuram	N. Arunachalam	Con.
Salem	S. V. Ramaswamy	Con.
Sriperumbudur (R)	P. Sivasankaran	DMK
Tenkasi	M. P. Swamy	Con.
Thanjavur	V. Vairava Thevar	Con.
Tindivanam	R. Venkatasubba Reddiar	Con.
Tiruchendur	T. T. Krishnamachari	Con.
Tiruchengode	S. Kandappan	DMK
Tiruchirapalli	Ananda Nambiar	CPI
Tirukoilur (R)	L. Elayaperumal	Con.
Tirunelveli	P. Muthiah	Con.
Tirupattur	R. Muthu Gounder	DMK
Tiruvallur	V. Govindasamy Naidu	Con.
Tiruvannamalai	R. Dharmalingam	DMK
Vellore	T. Abdul Wahid	Con.
Wandiwash (R)	A. Jayaraman	Con.

MAHARASHTRA (44)

Ahmednagar	Motilal K. Firodia	Con.
Akola	Mohammad Mohibbul Haq	Con.
Amravati	Mrs. Vimalabai P. Deshmukh	Con.
Aurangabad	Bhaurao D. Deshmukh	Con.
Baramati	Gulabrao Keshavrao Jedhe	Con.
Bhandara	R. M. Hajarnavis	Con.
Bhir	Dwarkadas Mantri	Con.
Bhiwandi (R)	Yashwantrao Martandrao Mukane	Con.
Bombay City—Central		
North (R)	N. S. Kajrolkar	Con.
Bombay City—Central		
South	V. B. Gandhi	Con.
Bombay City North	V. K. Krishna Menon	Con.
Bombay City South	S. K. Patil	Con.

<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
Buldana	S. R. Rane	Con.
Chanda	Shyamshah Lal	Ind.
Dhulia	C. A. Rawandale	Con.
Gondia (R)	Balakrishna R. Wasnik	Con.
Hatkanangle (R)	Krishnaji Laxman More	Con.
Jalgaon	J. S. Patil	Con.
Jalna	R. N. Yadav Lonikar	Con.
Karad	Dajisaheb Ramarao Chavan	Con.
Khamgaon (R)	Laxmanrao Shrawanji Bhatkar	Con.
Khed	Raghunath K. Khadilkar	Con.
Kolaba	Bhaskar Narayan Dighe	Con.
Kolhapur	V. T. Patil	Con.
Kopergaon	Annasaheb Shinde	Con.
Latur (R)	Tulsiram Dashrath Kamble	Con.
Malegaon	Madhavrao Laxmanrao Jadhav	Con.
Miraj	Vijayasinhrao Ramrao Daffe	Con.
Nagpur	M. S. Aney	Ind.
Nanded	Tulshidas Subanrao Jadhav	Con.
Nandurbar (R)	Laxman Vedu Valvi	Con.
Nasik	Y. B. Chavan	Con.
Osmanabad	T. A. Patil	Con.
Pandharpur (R)	T. H. Sonavane	Con.
Parbhani	Shivajirao S. Deshmukh	Con.
Poona	Shankarrao Shantaram More	Con.
Rajapur	Nath Pai	PSP
Ramtek	Madhavrao Bhagwantrao Patil	Con.
Ratnagiri	Smt. Sharda Mukherjee	Con.
Satara	Kisan Veer	Con.
Sholapur	Madeppa Bandappa Kadadi	Con.
Thana	Sonubhau Dagadu Baswant	Con.
Wardha	Kamalnayan Bajaj	Con.
Yeotmal	Deorao Shioram Patil	Con.

MYSORE (26)

Bangalore	<i>Vacant</i>	—
Bangalore City	K. Hanumanthaiah	Con.
Belgaum	H. V. Koujalgi	Con.
Bellary	Tekur Subramanyam	Con.
Bidar (R)	Ramchander Veerappa	Con.
Bijapur North	R. G. Dube	Con.
Bijapur South	S. B. Patil	Con.
Chamarajanagar (R)	S. M. Siddiah	Con.
Chikballapur	H. C. Linga Reddy	Con.
Chikodi	Vasantrya Lakshagounda Patil	Con.

<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
Chitradurga	S. Veerabasappa	Con.
Dharwar North	Smt. Sarojini B. Mahishi	Con.
Dharwar South	F. H. Mohsin	Con.
Gulbarga	Mahadevappa Rampure	Con.
Hassan	H. Siddananjappa	Con.
Kanara	Jaochim Alva	Con.
Kolar (R)	Dodda Thimmaiah	Con.
Koppal	Sivamurthy Swamy	LSS
Mandya	M. K. Shivananjappa	Con.
Mangalore	A. Shankar Alva	Con.
Mysore	M. Shankaraiya	Con.
Raichur	Jagannath Rao Chandriki	Con.
Shimoga	S. V. Krishnamoorthy Rao	Con.
Tiptur	C. R. Basappa	Con.
Tumkur	Mali Mariappa	Con.
Udipi	<i>Vacant</i>	

NAGALAND (1)**

S. Chubatoshi Jamir	†
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ORISSA (20)

Angul	Harekrushna Mahtab	Con.
Balasore	Gokulnanda Mohanty	Con.
Bhadrak (R)	Kanhu Charan Jena	Con.
Bhanjanagari	Mohan Nayak	Con.
Bhubaneswar	Purna Chandra Deo Bhanj	Con.
Bolangir (R)	Hrusikesh Mahananda	GP*
Chatrapur	A. T. Sarma	Con.
Cuttack	<i>Vacant</i>	
Dhenkanal	Baishnab Charan Patnaik	Con.
Jajpur (R)	Rama Chandra Mallick	Con.
Kalahandi	Pratap Keshari Deo	GP*
Kendrapara	Surendranath Dwivedy	PSP
Keonjhar	Laxmi Narayan Bhanj Deo	Con.
Koraput (R)	Ramachandra Ulaka	Con.
Mayurbhanj (R)	Maheswar Naik	
Nowrangpur	Jaganath Rao	Con.
Phulbani (R)	Rajendra Kohar	GP*

** Nominated by the President.

† Since joined the Congress Party.

* Since joined the Swatantra Party.

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<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
Puri	Bibhudendra Misra	Con.
Sambalpur	Kishen Pattnayak	SP
Sundergarh (R)	Yagya Narayan Singh	GP*

PUNJAB (22)

Ambala (R)	Chuni Lal	Con.
Amritsar	Gurmukh Singh Musafir	Con.
Bhatinda (R)	Dhanna Singh Gulshan	AD*
Ferozepore	Iqbal Singh	Con.
Gurdaspur	Diwan Chand Sharma	Con.
Gurgaon	Gajraj Singh Rao	Con.
Hissar	Mani Ram Bagri	SP
Hoshiarpur	Amar Nath Vidyalankar	Con.
Jhajjar	Jagdev Singh Siddhanti	HLS
Jullundur	Swaran Singh	Con.
Kaithal	Dev Dutta Puri	Con.
Kangra	Hem Raj	Con.
Karnal	Rameshwaranand	JS
Ludhiana	Kapur Singh	AD*
Mahendragarh	Yudhvir Singh Chaudhury	JS
Moga (R)	Buta Singh	AD*
Patiala	Hukam Singh	Con.†
Phillaur (R)	Sadhu Ram	Con.
Rohtak	Lahri Singh	JS
Sangrur	Ranjit Singh	Con.
Taran Taran	Surjit Singh Majithia	Con.
Una (R)	Daljit Singh	Con.

RAJASTHAN (22)

Ajmer	M. B. L. Bhargava	Con.
Alwar	Kashi Ram Gupta	Ind.
Banswara (R)	Ratan Lal	Con.
Barmer	Tan Singh	RRP
Bharatpur	Raj Bahadur	Con.
Bhilwara	<i>Vacant.</i>	—
Bikaner	Karni Singh	Ind.
Chittorgarh	Manikya Lal Varma	Con.
Dausa	Prithvi Raj	Swa
Ganganagar (R)	Panna Lal Barupal	Con.

* Since joined the Swatantra Party.

† Hukam Singh was returned on the Congress ticket, but ceased to have any party affiliation after his election as Speaker of the Lok Sabha.

<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
Hindaun	Tika Ram Paliwal	Con.
Jaipur	Smt. Gayatri Devi	Swa
Jalore	Harish Chandra Mathur	Con.
Jhalawar	Brij Raj Singh	Con.
Jhunjhunu	Radheshyam R. Morak	Con.
Jodhpur	Laxmi Mal Singhvi	Ind.
Kotah (R)	Onkar Lal Berwa	JS
Nagour	Surendra Kumar Dey	Con.
Pali	Jaswantrai Mehta	Con.
Sawai Madhopur (R)	Kesar Lal	Swa
Sikar	Rameshwar Tantia	Con.
Udaipur (R)	Dhuleshwar Meena	Con.

UTTAR PRADESH (86)

Agra	Achal Singh	Con.
Akbarpur (R)	Panna Lal	Con.
Aligarh	B. P. Maurya	RPI
Allahabad	Lal Bahadur Shastri	Con.
Almora	Jang Bahadur Singh Bist	Con.
Amroha	J. B. Kripalani	Ind.
Azamgarh	Ram Harakh Yadav	Con.
Bahraich	Ram Singh	Swa
Balarampur	Smt. Subhadra Joshi	Con.
Ballia	Murli Manohar	Con.
Banda	Smt. Savitri Nigam	Con.
Bansgaon (R)	Mahadeo Prasad	Con.
Bansi (R)	Sheo Narain	Con.
Bara Banki	Ram Sewak Yadav	SP
Bareilly	Brij Raj Singh	JS
Basti	Keshava Deva Malaviya	Con.
Bijnor	Prakash Vir Shastri	Ind.
Bilhaur	Braj Behari Mehrotra	Con.
Bisauli	Ansar Harvani	Con.
Budaun	Onkar Singh	JS
Bulandhshahr	Surendra Pal Singh	Con.
Chail (R)	Masuriya Din	Con.
Chandauli	Balkrishna Singh	Con.
Dehra Dun	Mahavir Tyagi	Con.
Deoria	Bishwanath Roy	Con.
Domariaganj	Kripa Shankar	Con.
Etah	Bishan Chandar Seth	HM
Etawah	Gopi Nath Dixit	Con.
Faizabad	Brij Basi Lal	Con.
Farrukhabad	Ram Manohar Lohia	SP

<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
Fatehpur	Gauri Shankar Kakkar	Ind.
Firozabad	Shambhu Nath Chaturvedi	Con.
Garhwal	Bhakt Darshan	Con.
Ghatampur (R)	Tula Ram	Con.
Ghazipur	Vishwanath Singh Gahmari	Con.
Ghosi	Jai Bahadur Singh	CPI
Gonda	Ram Ratan Gupta	Con.
Gorakhpur	Sinhasan Singh	Con.
Hamirpur	Mannoo Lal Dwivedi	Con.
Hapur	Smt. Kamala Chaudhri	Con.
Hardoi (R)	Kindar Lal	Con.
Hata	Kashi Nath Pandey	Con.
Hathras (R)	<i>Vacant.</i>	—
Jalaun (R)	Ram Sewak	Con.
Jalesar	Krishnapal Singh	Swa
Jaunpur	Rajdeo Singh	Con.
Jhansi	Km. Sushila Nayar	Con.
Karimganj	P. K. Khanna	Con.
Kairana	Yash Pal Singh	Ind.*
Kaisarganj	Smt. Basant Kunwar Ba	Swa
Kanpur	S. M. Banerjee	Ind.
Kheri	Balgovind Verma	Con.
Khurja (R)	Kanhaiya Lal Balmiki	Con.
Lalganj (R)	Visram Prasad	PSP
Lucknow	B. K. Dhaon	Con.
Machhlishahar (R)	Ganapati Ram	Con.
Maharajganj	Mahadeva Prasad	Con.
Mainpuri	Badshah Gupta	Con.
Mathura	Digambar Singh	Con.
Meerut	Shah Nawaz Khan	Con.
Mirzapur	Shyam Dhar Misra	Con.
Misrikh (R)	Gokaran Prasad	JS
Mohanlalaganj (R)	Smt. Ganga Devi	Con.
Moradabad	Muzaffar Hussain	RPI
Musafirkhana	Rananajaya Singh	Con.
Muzaffarnagar	Sumat Prasad	Con.
Nainital	Krishna Chandra Pant	Con.
Phulpur	Sm. Vijaylakshmi Pandit	Con.
Pilibhit	Mohan Swarup	PSP
Pratapgarh	Ajit Pratap Singh	JS

* Since joined the Swatantra Party.

<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
Rae Bareli (R)	Baij Nath Kureel	Con.
Rampur	S. Ahmed Mehdi	Con.
Ramsanehighat (R)	Ramanand Shastri	Con.
Rasra	Sarjoo Pandey	CPI
Robertsganj (R)	Ram Swarup	Con.
Saharanpur (R)	Sunder Lal	Con.
Salempur	Vishwanath Pandey	Con.
Salon	Dinesh Singh	Con.
Sardhana	Krishan Chandra Sharma	Con.
Shahabad	Yuvaraj Dutta Singh	JS
Shahjahanpur (R)	Lakhan Dass	Ind.
Sitapur	Suraj Lal Verma	JS
Sultanpur	Kunwar Krishna Verma	Con.
Tehri-Garhwal	Manabendra Shah	Con.
Unnao	Krishna Deo Tripathi	Con.
Varanasi	Raghunath Singh	Con.

WEST BENGAL (36)

Asansol	Atulya Ghosh	Con.
Ausgram (R)	Mono Mohan Das	Con.
Balurghat (R)	Sardar Murmu	CPI
Bankura	Ramgoti Banerji	Con.
Barasat	Arun Chandra Guha	Con.
Barrackpore	Smt. Renu Chakravarty	CPI
Basirhat	Humayun Kabir	Con.
Berhampur	Tridib Kumar Chaudhuri	RSP
Birbhum (R)	Sisir Kumar Saha	Con.
Burdwan	N. C. Chatterjee	Ind.
Calcutta Central	Hirendra Nath Muherjee	CPI
Calcutta East	Ranen Sen	CPI
Calcutta North-West	Asoke Kumar Sen	Con.
Calcutta South-West	Indrajit Gupta	CPI
Contai	Basanta Kumar Das	Con.
Cooch-Behar (R)	P. C. Barman	Con.
Darjeeling	T. Manaen	Con.
Diamond Harbour	Sudhansu Bhusan Das	Con.
Ghatal	Sachindra Choudhuri	Con.
Hooghly	Prabhat Kar	CPI
Howrah	Mohammad Elias	CPI
Jalpaiguri	Nalini Ranjan Ghosh	Con.
Jhargram (R)	Subodh Hansda	Con.
Joynagar (R)	Paresh Nath Kayal	Con.
Katwa	Saradish Roy	CPI

<i>Constituency</i>	<i>Name of Member</i>	<i>Party</i>
Malda	Smt. Renuka Roy	Con.
Mathurapur (R)	Purnendu Sekhar Naskar	Con.
Midnapur	Gobinda Kumar Singha	Con.
Murshidabad	Syed Badrudduja	Ind.
Nabadwip	H. P. Chatterjee	Ind.
Purulia	Bhajahari Mahato	Ind.
Raiganj	Chapalakanta Bhattacharya	Con.
Serampore	Dinen Bhattacharya	CPI
Tamluk	Satish Chandra Samanta	Con.
Uluberia	Purnendu Narayan Khan	Con.
Vishnupur (R)	Pashupati Mondal	Con.

ANDAMAN AND NICOBAR ISLANDS (1)*

Niranjan Lal —†

DADRA AND NAGAR HAVELI (1)*

Sanji Rupji —†

DELHI (5)

Chandni Chowk	Sham Nath	Con.
Delhi Sadar	Shiv Charan Gupta	Con.
Karol Bagh (R)	Naval Prabhakar	Con.
New Delhi	Mehr Chand Khanna	Con.
Outer Delhi	Brahm Prakash	Con.

GOA, DAMAN AND DIU (2)

Panjim	Peter Augustus Alvares	MG
Murmagao	Mukund Padmanaba Shinkre	MG

HIMACHAL PRADESH (4)

Chamba	Chattar Singh	Con.
Mahasu	Virbhadr Singh	Con.
Mandi	Lalit Sen	Con.
Sirmur (R)	Pratap Singh	Con.

LACCADIVE, MINICOY AND AMINDIVI ISLANDS (1)*

K. Nallakoya Thangal —†

† Since joined the Congress Party.

* Nominated by the President.

MANIPUR (2)

Inner Manipur	S. T. Singh	Con.
Outer Manipur (R)	R. Keishing	SP†

NORTH-EAST FRONTIER AGENCY (1)*

D. Ering	—†
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PONDICHERRY (1)

Ku Sivappraghassan	Con.
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TRIPURA (2)

Tripura East (R)	Dasaratha Deb	CPI
Tripura West	Biren Dutta	CPI

ANGLO-INDIANS (2)*

Frank Anthony	—
A. E. T. Barrow	—

SPEAKERS AND CHAIRMEN*States**Speaker of the
Legislative Assembly**Chairman of the
Legislative Council*

Andhra Pradesh	B. V. Subba Reddy	M. Hanumantha Rao
Assam	Mahendra Mohan Chowdhury	—
Bihar	Lakshmi Narayan Sudhansu	D. S. Singh
Gujarat	Fateh Ali H. Palejwala	—
Jammu & Kashmir	G. M. Mir Rajpuri	S. N. Fotedar
Kerala	—	—
Madhya Pradesh	Kunji Lal Dubey	—
Madras	S. Chella Pandian	M. A. Manickavelu
		Naicker
Maharashtra	T. S. Bharde	V. S. Page
Mysore	B. Vaikunta Baliga	G. V. Hallikeri
Nagaland	T. N. Angami	—
Orissa	Lingaraj Panigrahi	—
Punjab	Harbanslal	Vacant

<i>States</i>	<i>Speaker of the Legislative Assembly</i>	<i>Chairman of the Legislative Council</i>
Rajasthan	Ram Niwas Mirdha	—
Uttar Pradesh	Madan Mohan Varma	R. V. Dhulekar
West Bengal	Keshab Ch. Basu	P. C. Guha Ray
<i>Territories</i>		
Goa Daman & Diu	Pandurang P. Shilodkar	—
Himachal Pradesh	Desh Raj Mahajan	—
Manipur	K. Ibetombi Singh	—
Pondicherry	A. S. Kangeyan	—
Tripura	Upendra Kr. Roy	—

FOREIGN AFFAIRS

Organisation—The Ministry of External Affairs is responsible for the conduct of India's relations with foreign countries. The Ministry is also responsible for the country's representation in the U. N. and it advises other Ministries and the State Governments when the latter have dealings with foreign governments or institutions. In the domestic sphere, it is responsible for the administration of the NEFA, Pondicherry and Goa. The administration of the Indian Emigration Act of 1923, the Reciprocity Act of 1943, the Port Haj Committee Act of 1932, the Indian Merchant Shipping Act in so far as it relates to pilgrim ships, the Indian Pilgrim Shipping Rules of 1933, the Protection of Pilgrims Act of 1887 (Bombay) also forms the responsibility of this Ministry.

The *Minister of State* looks after the Eastern, Western and the Administration Divisions and also deals with matters relating to Pondicherry, Goa and other former French and Portuguese possessions in India. The *Deputy Minister* deals with all other Divisions except the China Division, Pakistan Division and the United Nations and Conference Division which are dealt with directly by the Minister for External Affairs.

The *Foreign Secretary* is in charge of the Eastern Division, China Division, Western Division and the United Nations and Conference Division.

The *Commonwealth Secretary* is in charge of the Southern and Pakistan Divisions.

The *Special Secretary*, in addition to being in general charge of the administration of the Ministry and the Indian Missions abroad, deals with the work of the Africa and West Asia Division which was split up into two Divisions—one dealing with countries of West Asia and North Africa and the other with the remaining African countries south of the Sahara.

Three Secretaries and the Secretary, Ministry of International Trade, and the Jt. Secretary (Administration) constitute the *Foreign Service Board* which is responsible for all diplomatic commercial and consular postings and transfers and for all promotion and confirmations of officers of the I.F.S. Branch. The Foreign Secretary is the Chairman of the Board.

Indian Foreign Service—Like I.A.S. and I.P.S., Indian Foreign Service has been constituted. The *Foreign Service Inspectorate* which is headed by an officer of the rank of Additional Secretary is revived and the terms of reference of the Inspectorate have been considerably enlarged to include not only a review of the allowances admissible to the officers and the staff posted abroad, but also an overall assessment of the working and effectiveness of the Missions.

The Joint Secretary (Co-ordination & Information) is in overall charge of External Publicity. This post is newly created in pursuance of the recommendations of the Shelvankar report. He also took over the work of political co-ordination and the Economic and Co-ordination Division was redesignated as Economic Division. In January 1965, the post of Director (External Publicity Division) was held in abeyance and the Joint Secretary (Co-ordination & Information) took over complete charge of the External Publicity Division as Joint Secretary (External Publicity).

On June 15, 1965 the Govt. of India appointed a Committee to review the organisation and working of the Indian Foreign Service in the light of the experience gained since its inception and the changes that have taken place in India and in the world during this period. The object of such a review should be to bring about an improvement in the efficiency of the Foreign Service and in the working of Indian Missions abroad so as to make the Foreign Service better able to meet present and future needs of India's foreign policy and diplomatic representation abroad. The members of the Committee are: Messrs. N. R. Pillai (*Chairman*), C. S. Jha, L. P. Singh, D. S. Joshi, Anim Hussain and N. Krishnan (*Secretary*). The total strength of the I.F.S. cadres (both permanent and temporary posts) is 383.

Indian Foreign Service Branch (B)—The total strength of the I.F.S. (B) cadres (both permanent and temporary posts) is 2,473.

Indian Frontier Administrative Service—To meet requirements of the administration of border areas, this Service has been instituted. The substantive strength of the cadre at the end of March, 1963 was 1 post in the supertime grade, 36 posts in senior and 33 posts in junior grade.

Missions Abroad—India now maintains diplomatic and consular relations with as many as 122 countries and has 75 Embassies, 19 High Commissions, 6 Commissions, 1 Legation, 12 Consulates-General, 5 Consulates, 5 Vice-Consulates, 4 Trade Commissions, 2 Deputy High Commissions, 6 Special Missions and 1 Visa Office.

Central Passport and Emigration Organisation—The *Passport and Visa Division* is responsible for the implementation of the passport and emigration policy of the Government of India and control of the Central Passport and Emigration Organisation including Regional Passport and Emigration Offices in Delhi, Bombay, Calcutta, Madras and Lucknow.

The five zonal passport offices received 54,685 fresh passport applications during 1964-65, besides 2,082 applications which were pending at the end of March, 1964. The revenue realised by way of passport and emigration fees by these offices during the year, amounted to Rs. 10,56,769.72.

In all, 41,459 passports were issued by the Regional Passport Offices and 2,367 Official passports and 355 Diplomatic passports issued to officials of the Central Government directly by the headquarters of the Ministry.

The number of passports issued by the Ministry in 1963 are as follows :—

Diplomatic passports ..	281	Passports granted at Bombay ..	15,813
Official passports ..	2,657	" " " Delhi ..	21,909
Indo-Pakistan passports ..	110	" " " Madras ..	12,828
Emergency certificates ..	11	" " " Calcutta ..	5,056
Visas granted to foreigners posted in India ..	2,969	" " " Lucknow ..	2,530
		Total passports granted ..	58,136

Emigration—*Indian Emigration (Amendment) Act 23 of 1963* was passed, which prescribes more severe penalties for illicit emigration. The new Act came into force from January 1, 1964.

India's Relation with International Organisation—India is actively associated with the following agencies of the *U. N.*—(1) General Assembly, (2) Committees and Commissions of the General Assembly, (3) Economic and Social Council, (4) Functional Commissions of the Economic and Social Council, (5) Regional Commission of the Economic and Social Council, (6) Other Subsidiary Bodies of the Economic and Social Council, (7) Specialised Agencies, such as FAO, GATT, IBRD, IMF, IFC, IDA, ICAO, ITU, WMO, UPU, ILO, UNESCO, WHO, IMCO, (8) International Atomic Energy Agency, (9) Other 96 *International Organisations*, such as Red Cross etc.

INDIAN REPRESENTATIVES IN FOREIGN COUNTRIES

AMBASSADORS

- Afghanistan*—Gen. P. N. Thapar, Embassy of India, Shar-e-Nau, Kabul.
- Algeria*—R. Goburdhan, Embassy of India, Algiers.
- Argentina*—Inder Sen Chopra, Embassy of India, Lavalle-2, Buenos Aires (concurrently Ambassador to Paraguay and Uruguay).
- Austria*—R. G. Rajwade, Embassy of India, Vienna.
- Belgium*—K. B. Lall, Embassy of India, 585, Avenue Louise, Square du Bois, Brussels (concurrently Ambassador to Luxembourg).
- Bolivia*—Ambassador resident in Rio de Janeiro (Brazil).
- Brazil*—Embassy of India, Rua Baro do Flamengo, 22 Aptos 801 & 802, Rio de Janeiro (concurrently Ambassador to Venezuela and Bolivia).
- Bulgaria*—Khemchand R. F. Khilnani, Ambassador resident at Bucharest.
- Burma*—Vice-Admiral R. D. Katari, Embassy of India, Oriental Buildings, 545-547 Merchant St., Rangoon.
- Cambodia*—P. N. Menon, Embassy of India, Phnom-Penh, Cambodia.
- Cameroon*—P. L. Bhandari, Ambassador resident at Lagos (concurrently H. C. to Nigeria.)
- Chile*—Bhagwan Khemchand Massand, Embassy of India, Santiago (concurrently Ambassador to Colombia and Peru).
- China*—J. S. Mehta, Charge d' Affaires, Peking.
- Colombia*—Bhagwan Khemchand Massand, Ambassador resident at Santiago (Chile).
- Congo*—V. S. Charry, Embassy of India, Leopoldville.
- Cuba*—Niranjan Singh Gill, Ambassador resident at Mexico City.
- Czechoslovakia*—M. P. Mathur, Embassy of India, Valdsstejnaska-6, Prague-7.
- Dahomey*—P. L. Bhandari, Ambassador (concurrently H. C. to Nigeria with residence at Lagos).
- Denmark*—Avtar Singh, Embassy of India, Copenhagen.
- Ethiopia*—J. K. Atal, Embassy of India, P.B. 528, Addis Ababa.
- Finland*—Khub Chand, Ambassador resident at Stockholm (Sweden).
- France*—Rajeshwar Dayal, Embassy of India, 15 Rue Alfred Dehodencq, Paris.
- Germany, Federal Republic of*—S. K. Banerjee, Embassy of India, 262 Koblenzerstrasse, Bonn.
- Greece*—R. S. Mani, Ambassador resident at Belgrade (Yugoslavia).
- Guinea*—J. C. Kakar, Ambassador resident at Accra (Ghana).
- Hungary*—S. V. Patel, Embassy of India, 14 Buzarvirag Utca VII, Budapest-II.
- Indonesia*—P. Ratnam, Embassy of India, P.B. 118-44, Kebon Serih, Djakarta.

- Iran*—Air-Marshall A. M. Engineer, Embassy of India, Avenue Shah Raza, Tehran.
- Iraq*—Saadat Ali Khan, Embassy of India, 22/12, Al Tabari St., Waziriah, Baghdad.
- Ireland*—R. K. Tandon, 60 Fitzwilliam Sq., Dublin.
- Italy*—Maharaja Yadvinder Singh of Patiala, Embassy of India, via Francisco Denze, 36, Rome (concurrently Minister to Albania and High Commissioner to Malta).
- Ivory Coast*—Abid Hasan Safrani, Ambassador resident at Dakar (Senegal).
- Japan*—B. F. H. B. Tyabji, Embassy of India, No. 1, 2-Chome, Kudan, Chiyodaku, Tokyo.
- Jordan*—Samarendra Nath Sen, Ambassador resident at Beirut.
- Kuwait*—Samarendra Nath Sen, Ambassador resident at Beirut.
- Laos*—Bimalendu Kumar Sanyal, Embassy of India, Vientiane.
- Lebanon*—Samarendra Nath Sen, Embassy of India, Saleamarani Building, Rue Kantri, Beirut (concurrently Ambassador to Jordan and Kuwait and High Commissioner to Cyprus).
- Liberia*—J. C. Kakar, Ambassador resident at Accra (Ghana).
- Libya*—S. N. Haksar, Ambassador resident at Cairo.
- Luxembourg*—K. B. Lall (concurrently Ambassador to Belgium with residence at Brussels).
- Malagasy*—Cyril John Stracey, Charge d' Affaires, 14, Rue Peacambone, Tananarive.
- Mali*—J. C. Kakar (concurrently H. C. to Ghana with residence at Accra).
- Mexico*—Niranjan Singh Gill, Embassy of India, Monte Libano Avenue Juarez, No. 97, D. P. Mexico City (concurrently Ambassador to Panama and Cuba).
- Mongolia*—T. N. Kaul, Ambassador resident at Moscow.
- Morocco*—Yogendra Krishna Puri, Embassy of India, 10, Place Mohammad V, Rabat (concurrently Ambassador to Tunisia).
- Nepal*—Shriman Narayan, Embassy of India, Katmandu.
- Netherlands*—Rajkumar Raghunath Sinha, Embassy of India, Buiternrustweg 2, The Hague.
- Norway*—Apa B. Pant, Embassy of India, 1 Colbjrnsens Gate, Oslo.
- Panama*—Niranjan Singh Gill (concurrently Ambassador to Mexico and Cuba with residence at Mexico City).
- Paraguay*—Inder Sen Chopra, Ambassador with residence at Buenos Aires.
- Peru*—Bhagwan Khemchand Massand, Ambassador with residence at Santiago (Chile).
- Philippines*—G. J. Malik, Embassy of India, 1856, Nabaraska, Malate, Manila.
- Poland*—Dr. N. V. Rajkumar, Embassy of India, 3 Abeje Roz, Warshaw.
- Rumania*—K. R. F. Khilnani, Embassy of India, Bucharest (concurrently Ambassador to Bulgaria).
- Saudi Arabia*—M. K. Kidwai, Embassy of India, Jedda.

- Senegal*—A. H. Safrani, Embassy of India, Dakar (concurrently Ambassador to Upper Volta & Ivory Coast and H. C. to Gambia).
- Somalia*—Jagat Singh, Embassy of India, Mogadisu.
- Spain*—Maharaja Swai Man Singh Bahadur of Jaipur, Embassy of India, Alfonso XII, 46 First Floor, Madrid.
- Sudan*—S. S. Ansari, Embassy of India, Ismail Pasha Avenue, Khartoum.
- Sweden*—Khub Chand, Embassy of India, V. Tradgardsgatan 15, Stockholm (concurrently Ambassador to Finland).
- Switzerland*—V. C. Trivedi, Embassy of India, 20 Kalcheggweg, Berne (concurrently Ambassador to Vatican).
- Syria*—A. S. Mehta, Embassy of India, Damascus.
- Thailand*—K. V. Padmanabhan, Embassy of India, 139, Pan Road, Bangkok.
- Togo*—P. L. Bhandari, Ambassador with residence at Lagos (Nigeria).
- Tunisia*—Y. K. Puri (concurrently Ambassador to Morocco with residence at Rabat).
- Turkey*—K. L. Mehta, Embassy of India, 50 Kizilirmark Sokok, Koctepe, Ankara.
- United Arab Republic*—S. N. Haksar, Embassy of India, 5, Sharia Maahad El Swissri, Cairo (concurrently Ambassador to Libya and Yemen).
- Upper Volta*—A. H. Safrani, Ambassador with residence at Dakar (Senegal).
- Uruguay*—Inder Sen Chopra, Ambassador resident at Buenos Aires.
- U. S. A.*—B. K. Nehru, Embassy of India, 2107, Massachussets Avenue, N. W., Washington 8, D.C.
- U.S.S.R.*—T. N. Kaul, Embassy of India, 6 & 8, Ulitisa Obukha, Moscow (concurrently Ambassador to Mongolia).
- Vatican*—V. C. Trivedi, Ambassador with residence at Berne (Switzerland).
- Venezuela*—vacant concurrently Ambassador to Brazil and Bolivia with residence at Rio de Janeiro).
- Yemen*—S. N. Haksar, Ambassador resident at Cairo.
- Yugoslavia*—R. S. Mani, Embassy of India, Proleterskeh, Brigade, 9, Belgrade (concurrently Ambassador to Greece).

HIGH COMMISSIONERS

- Australia*—Dr. Dwarka Nath Chatterjee, Canberra.
- Canada*—B. K. Acharya, 200, MacLaren St., Ottawa-4.
- Ceylon*—Bhimsen Sachar, 7, Station Road, Kallupitiya, Colombo-3.
- Cyprus*—Samarendra Nath Sen (concurrently Ambassador to Lebanon with residence at Beirut).
- Gambia*—A. H. Safrani (concurrently Ambassador to Senegal, Upper Volta and Ivory Coast with residence at Dakar).
- Ghana*—J. C. Kakar, P.O. 3040, Accra (concurrently Ambassador to Mali, Guinea and Liberia and High Commissioner to Sierra Leone).

- Kenya*—Prem Bhatia, Nairobi (concurrently Consul-General to Rwanda and Burundi).
- Malawi*—D. S. Kamtekar, Zomba.
- Malaysia*—M. K. Kidwai, 4, Gin Lek Road, Kuala Lumpur.
- Malta*—Maharaja Yadvinder Singh of Patiala (concurrently Ambassador to Italy and Minister to Albania with residence at Rome).
- New Zealand*—Surinder Nath Chopra, Wellington.
- Nigeria*—P. L. Bhandari, Private Mail Bag 2322, Lagos (concurrently Ambassador to Cameroon, Dahomey and Togo).
- Pakistan*—Kewal Singh, 3, Bonus Road, Karachi.
- Sierra Leone*—J. C. Kakar, resident at Accra (Ghana).
- Tanzania*—Nootaki Venkatesh Rao, Dar-Es-Salaam.
- Trinidad & Tobago*—Muni Lal, Port of Spain (concurrently accredited as Commissioner of India to British Guiana).
- Uganda*—Kumar Ram Pratap Singh, Kampala.
- U.K.*—Dr. Jivraj Mehta, 'India House', Aldwych, London W.C. 2.
- Zambia*—S. Krishnamurti, Lusaka.

LEGATIONS

- Albania*—Maharaja Yadvinder Singh of Patiala (Minister), resident at Rome.

COMMISSIONS

- Aden*—A. R. Sethi.
- British Guiana*—Muni Lal, resident at Port of Spain.
- Fiji*—D. Murugesan.
- Hong Kong*—J. K. Ganju, Tower Court, 11th Floor, Tyaan Avenue, Hong Kong.
- Mauritius*—P. R. S. Mani, Frere Felix de Valios St., Port Louis, Mauritius.
- Antigua, Bahamas, Barbados, Cayman Islands, Dominica, Grenada, etc.*—Muni Lal, resident at Port of Spain.

TRADE COMMISSIONS & OFFICES

- Australia*—R. Axel Khan, Sydney.
- Bahrein*—Randhir Singh.
- Canada*—Y. R. Dhawan, Vancouver.
- Dubai*—H. R. Ahuja.

CONSULATES-GENERAL

- Berlin*—N. P. Jain.
- Comores (Re-union Island)*—S. G. Ramachandran.
- Frankfurt (W. Germany)*—V. C. Vijaya Raghavan.
- Hamburg (W. Germany)*—D. J. Sengupta, 14, Burchardstrasse, Hamburg.
- New York*—Dr. S. Gupta, 3 East 64th Street, New York.

Muscat (Arabia)—C. L. Sethi.

Rwanda & Burundi—Prem Bhatia, resident at Nairobi (Kenya).

San Francisco—Mohd. Yunus, 417, Montgomery Street, San Francisco.

South Korea—L. Chibber, Seoul.

Surinam (Dutch Guinea)—Muni Lal (concurrently High Commissioner to Trinidad & Tobago and Commissioner to Br. Guiana).

North Vietnam—Dr. B. S. Chavan, Hanoi.

South Vietnam—P. S. Kotda Sangani, Saigon.

SPECIAL MISSIONS

Bhutan and Sikkim—V. H. Coelho (Political Officer).

United Nations—G. Parthasarathy, New York.

Cambodia—K. L. Bindra (Alternate Delegate-cum-Adviser).

Laos—A. B. Bhadkamkar (Chairman, I.C.S.C. & Leader of Indian Delegation).

North Vietnam—A. W. B. Vaz (Political Adviser).

South Vietnam—M. A. Rahman (Chairman & Leader of Indian Delegation).

CONSULATES

Iraq—R. N. Joshi, Basrah.

Iran—H. L. Kashyap, Khorramshahr.

Indonesia—P. R. Nambisan, Medan.

Japan—T. V. Ramakrishna Rao, 1/2, Yamamoto-dori, 3, Chome, Ikutu-Ku, Kobe.

U.S.S.R.—P. H. Desai, Odessa.

VICE-CONSULATES

Afghanistan—H. K. Malhotra, Jalalabad.

K. N. Madan, Kandahar.

Burma—Trinath Singh, Mandalay.

Kenya—A. S. Dixit, Mombasa.

Iran—M. L. Chaudhury, Zahidan.

HONORARY CONSUL-GENERALS & CONSULS

Belgium—Robert Desprichins, Ghent.

Canary Islands—Chandan Boolchand.

French Somaliland—S. J. Kothari.

Greece—L. E. Vafiadias, Athens.

Hawaii—Mrs. G. Watumull, Honolulu.

Italy—Jack Clerici, Genoa.

Libya—Narni Neechamull.

Munich (W. Germany)—P. H. Von Mitterwallner.

Stuttgart (W. Germany)—Dr. R. Kisseal.

Ohio (U.S.A.)—Col. G. P. Bickford, Cleveland.

Panama—Iqbal Singh Wadhwa.

Paraguay—Dr. P. M. Vargas, Asuncion.

FOREIGN REPRESENTATIVES IN INDIA

AMBASSADORS

Country	Designation, Name and Address
<i>Afghanistan</i>	.. Ambassador (Vacant), 24, Ratendone Road, New Delhi-11.
<i>Algeria</i>	.. Ambassador, Ali Lakhdari, 59, Regal Bldg., New Delhi-1.
<i>Argentina</i>	.. Charge d' Affaires, Alexandro E. Calcagni, 137-A, Jor Bagh Nursery, New Delhi-3.
<i>Austria</i>	.. Ambassador, Dr. Georg Schlumberger, 3A, Nyaya Marg, Chanakyapuri, New Delhi-11.
<i>Belgium</i>	.. Ambassador, Jean Leroy, 7, Golf Links, New Delhi-3.
<i>Bolivia</i>	.. Ambassador, Dr. G. Q. Galdo, 126, Jor Bagh, New Delhi-3.
<i>Brazil</i>	.. Ambassador, F. Mala de Mendonca, 8, Aurangzeb Road, New Delhi-11.
<i>Bulgaria</i>	.. Ambassador, Christo Dimitrov, 198, Golf Links, New Delhi-3.
<i>Burma</i>	.. Ambassador, Maha Thiri Thudhamma Daw Khin Kye (Madam Aung San), 3/50F, Chanakyapuri, New Delhi-11.
<i>Cambodia</i>	.. Ambassador, Nong Kimny, 25, Golf Links, New Delhi-3.
<i>Chile</i>	.. Ambassador, Julio Barrenechea Pino, 51, Golf Links, New Delhi-3.
<i>China</i>	.. Charge d' Affaires, Chen Chao-Yuan, Jind House, Lytton Road, New Delhi-1.
<i>Colombia</i>	.. Ambassador, G. Manuel Agudelo, 188, Jor Bagh, New Delhi-3.
<i>Cuba</i>	.. Charge d' Affaires, Martin Mora, 40, Ratendone Road, New Delhi-11.
<i>Czechoslovakia</i>	.. Ambassador, Jaroslav Kohout, 45, Sundar Nagar, New Delhi-11.
<i>Denmark</i>	.. Ambassador, Arne Bogh Andersen, 6, Golf Links, New Delhi-3.
<i>Ethiopia</i>	.. Ambassador, Blatta Mesfin Bagashet, 29, Prithviraj Road, New Delhi-11.

- Finland* .. Ambassador, Asko Paivio Ivalo, 43A, Prithviraj Road, New Delhi-11.
- France* .. Ambassador, M. Jean Daridan, 2, Aurangzeb Road, New Delhi-11.
- Germany, Federal Republic of* .. Ambassador, Dietrich von Mirbach, 6/50G, Shantipath, Chanakyapuri, New Delhi-11.
- Greece* .. Ambassador, Johu Phrantzes, 123, Ashoka Hotel, New Delhi-11.
- Hungarian People's Republic* .. Ambassador, Janos Nagy, 15, Jor Bagh, New Delhi-3.
- Indonesia* .. Ambassador, Mr. Suska, 50-A, Chanakyapuri, New Delhi-11.
- Iran* .. Ambassador, Dr. Jalaluddin Abdoh, 1, Hailey Road, New Delhi-1.
- Iraq* .. Ambassador, Munir Rashid, D-24, N.D.S.E. Part II, New Delhi-16.
- Ireland* .. Ambassador, William Warnock, 55, Sundar Nagar, New Delhi-11.
- Italy* .. Charge d' Affaires, Dr. Michael Lanza, 7, Jor Bagh, New Delhi-3.
- Japan* .. Ambassador, Osamu Itagaki, Plot 4, Block 50G, Chanakyapuri, New Delhi-11.
- Jordan* .. Ambassador, Kemal Homoud, 149/48, Malcha Marg, Chanakyapuri, New Delhi-11.
- Kuwait* .. Ambassador, Yacub A. A. Al Rushaid, New Delhi.
- Laos* .. Charge d' Affaires, Platthana Chounramany, 4, Circular Road, S.W. Extn., New Delhi-11.
- Lebanon* .. Ambassador, Mahmoud Hafez, 23/48, Panch Sheel Marg, New Delhi-11.
- Mexico* .. Ambassador, Octavio Paz Lozano, 136, Golf Links, New Delhi-3.
- Mongolian People's Republic* .. Ambassador, Oyuny Khosbayer, 21, Panch Sheel Marg, Chanakyapuri, New Delhi-11.
- Morocco* .. Ambassador, Alarbi Bennani, 199, Jor Bagh, New Delhi-3.
- Nepal* .. Ambassador, Yadu Nath Khanal, Barakhamba Road, New Delhi-1.
- Netherlands* .. Ambassador, J. G. B. van Blokland, 4, Ratendone Road, New Delhi-11.
- Norway* .. Ambassador, Haakon Nord, Kautilya Marg, Chanakyapuri, New Delhi-11.
- Peru* .. Ambassador, C. Eduardo Sarmiento, 656, Ashoka Hotel, New Delhi-11.

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- Philippines* .. Ambassador, Mauro Calingo, Thapar House, 124, Janpath, New Delhi-1.
- Poland* .. Ambassador, Przemyslaw Ogradzinski, 22, Golf Links, New Delhi-3.
- Rumania* .. Ambassador, Aurel Ardeleanu, 48, Golf Links, New Delhi-3.
- Saudi Arabia* .. Ambassador, Shaikh Mohamed Al-Hamad Al-Shubaili, 6, Tilak Marg, New Delhi-1.
- Sudan* .. Ambassador, Sayed Ahmed Salah Bukhari, 147, Sundar Nagar, New Delhi-11.
- Spain* .. Ambassador, Dr. Pelayo G. Olay, 12, Prithviraj Road, New Delhi-11.
- Sweden* .. Ambassador, Gunnar E. Heckscher, Nyaya Marg, Chanakyapuri, New Delhi-11.
- Switzerland* .. Ambassador, Dr. Rene Faessler, Nyaya Marg, Chanakyapuri, New Delhi-11.
- Syrian Arab Rep.* .. Ambassador, Omar Abu Richech, 30/48, Panch Steel Marg, Chanakyapuri, New Delhi-11.
- Thailand* .. Ambassador, Chitti Sucharitakul, 56N, Nyaya Marg, Chanakyapuri, New Delhi-11.
- Turkey* .. Ambassador, Fikret Belbez, 27, Jor Bagh, New Delhi-3.
- United Arab Rep.* .. Ambassador, Issa Abdal Latif Serag el-Din, 26, Jor Bagh, New Delhi-3.
- U.S.A.* .. Ambassador, Chester Bowles, Shantipath, Chanakyapuri, New Delhi-11.
- U.S.S.R.* .. Ambassador, I. A. Benediktov, Shantipath, Chanakyapuri, New Delhi-11.
- Venezuela* .. Ambassador, Benjamin Delgado, New Delhi.
- Yugoslavia* .. Ambassador, Dr. Radivoj Uvalic, 13, Sundar Nagar, New Delhi-11.

HIGH COMMISSIONERS

- Australia* .. High Commissioner, Sir Arthur Harold Tange, 9/48, Sardar Patel Marg, Chanakyapuri, New Delhi-11.
- Canada* .. High Commissioner, D. Roland Michener, 4, Aurangzeb Road, New Delhi-11.
- Ceylon* .. High Commissioner, H. S. Amarasinghe, 224, Jor Bagh, New Delhi-3.
- Ghana* .. High Commissioner, S. K. Anthony, 2, Golf Links, New Delhi-3.
- Malaysia* .. High Commissioner, Zaiton Ibrahim bin Ahmed, 143, Sundar Nagar, New Delhi-11.
- New Zealand* .. High Commissioner, J. E. Farrell, 39, Golf Links, New Delhi-3.

- Nigeria* .. High Commissioner, Adedokun A. Haastrup, 5, Golf Links, New Delhi-3.
- Pakistan* .. High Commissioner, M. Arshad Husain, 50G, Shanti-path, Chanakyapuri, New Delhi-11.
- Tanzania* .. High Commissioner, Salim Ahmed Salim, 42, Golf Links, New Delhi-3.
- U.K.* .. High Commissioner, John Freeman, Chanakyapuri, New Delhi-11.
- Uganda* .. High Commissioner, George W. M. Kamba, New Delhi.

LEGATIONS

- Holy See* .. Apostolic Internuncio, Most Rev. James R. Knox, Niti Marg, Chanakyapuri, New Delhi-11.
- Uruguay* .. Charge d' Affaires, Jose D. Lissidini, 208, Golf Links, New Delhi-3.

INDIAN POLITICS

PAKISTAN'S ATTACK ON INDIA

India faced one of the gravest crises since independence when Pakistan launched a full-scale attack on her territory. Thanks to the courage and determination of our people and the armed forces, the invaders were defeated in decisive battles on every front which they chose to open during the 22 days of war in the western sector. The Pakistani attack began on September 1, 1965 in the Chhamb sector of Punjab and a cease-fire was declared on September 23 according to a resolution passed by the Security Council of the U.N.

The genesis of this perfidious attack goes back to August 5, 1965, the day on which several thousand Pakistani soldiers in civilian dress infiltrated into different areas of Jammu and Kashmir. It was the intention of the Pakistani rulers to engineer a revolt within Kashmir with the help of these armed infiltrators. When this plan failed and the infiltrators began to be rounded up by the Indian security forces, then Pakistan jumped into the misadventure of launching a full-scale war on India, presumably with the hope of annexing Kashmir by force. Indian armed forces gave them a crushing blow.

Pakistan's plan was to seize Akhnoor which commands the strategic Chenab and then bring under control the vital line of communication of our forces in the Naushera-Rajouri-Poonch sector. Had this been successful, they could have struck a massive blow from Sialkot and thereby capture Jammu. Realising the gravity of the situation Indian army crossed the international line and advanced towards Lahore. It was not our intention, as General Chaudhury explained afterwards, to capture Lahore. Indian army waged a war of attrition on the better-equipped Pakistani forces. This strategy worked out remarkably well as the result of the 22 days' bitter war showed. Indian counter-attack was spread over a 30-mile front in three prongs along the Grand Trunk Road from Wagah to Dograi on the Khalra-Burki axis and along the Khemkaran-Kasur axis.

In the Kasur sector, Pakistan's 1st armoured division made an advance in the face of which Indian army made a strategic retreat. The enemy mistook it to be our military weakness and made further advance. At this time, by a tactical manoeuvre, Indian army took the enemy by surprise. They lured the enemy a few miles deep into our territory. The enemy armed with Sherman and Patton tanks and backed by the crack infantry regiment made full thrust on various points of the horse-shoe line which our army had by then formed. Here on this spot between September 9 and 10, Pakistan's armoured division with formidable tanks met its virtual graveyard. As many as 75 Patton tanks were lost by the enemy in the two days' encounter.

As the battle of Kasur-Khemkaran ensued, another military manoeuvre was made by the Indian army at Phillora in the Sialkot sector four days later. Pakistan had her 6th armoured division ready for action in the Sialkot sector. Indian army was ordered to engage the enemy at forward points. Accordingly, our armoured division moved towards Phillora. The enemy made a counter-attack and a fierce battle took place without break for a record period of 15 days. Here also, Pakistan received severe blow to her armoury. They lost, among other equipments, 76 Patton tanks during 4 days' battle from September 14 to 17. By the time cease-fire became effective on September 23 at 3-30 a.m. the Indian army held a salient of some 180 square miles, only 4,000 yards from Sialkot city.

In the Lahore sector, the enemy made a last ditch battle at Burki, a town only 3 miles from Lahore. From twelve pill-boxes they tried to thwart the advance of the Indian army. Our forces made supreme sacrifice to silence those pill-boxes and captured Burki on September 10. On September 6, another Pakistani village Wagah fell into our hands and our Jawans reached the Ichhogil canal. On the night of September 21, our infantry battalion engaged the Pakistani artillery a little distance from the big municipal town of Dograi. The town fell into our hands on September 22. It is this victory which shattered every hope of the enemy and thereby forced them to accept the cease-fire proposal.

War of Attrition—General Chaudhury and Air Marshal Arjan Singh made a study of the 22 days' war before the representatives of World Press soon after the cease-fire on September 24. General Chaudhury made it clear that it was not our intention to occupy either Lahore or Sialkot. Both places were well defended and an entry into either would have achieved very little at a heavy cost of men and material. Indian army's main objective, according to him, was to lock up the Pakistani armour—there were one armoured and two infantry divisions each in Lahore and Sialkot—and to engage it in a war of attrition. The Indian army had succeeded in doing so. He explained that there was no other way to stop the Pakistani advance into the Chhamb-Jaurian sector than by moving into the Lahore and Sialkot sectors. The Army Chief said that the armed infiltration into Jammu and Kashmir took place mainly from Haji Pir pass and so it became necessary to block that door.

Area under Occupation—During these operations, India had occupied three Pakistani posts in Kargil, 20 square miles in Tithwal, 200 square miles in the Uri-Poonch bulge, 180 square miles in the Sialkot sector, 140 square miles in the Lahore sector and 150 square miles in the Rajasthan sector. The area of Indian territory occupied by Pakistani army was 190 square miles in the Chhamb and Punjab sectors and 20 square miles in the Rajasthan sector. Apart from these, India had occupied 630 posts in the Rajasthan sector as against 230 by Pakistan.

Loss Suffered—According to official figures, Pakistan lost 475 tanks, including 39 captured intact during the war. This included 226 Pattons destroyed and 26 captured. In comparison, India lost 80 tanks. Besides, 73 Pakistani planes, all F-86 Sabre Jets and F-104s were shot down. India lost in all 28 planes and only one of them was a Canberra bomber.

Troop Casualty—The total number of Pakistani troops killed was 5,800, including 22 officers. The Indian losses were 2,759 killed.

Dubious Role of the U.N.—Ever since India noticed massive infiltration of Pakistani hordes into Kashmir from August 5 onwards, she made a strong complaint to the United Nations' Observers in Kashmir and asked them to stop these infiltrations from across the cease-fire line. General Nimmo, the Chief Military Observer in Jammu and Kashmir sent a detailed report to the Secretary-General, which, it was known later, clearly said that Pakistan had instigated these infiltrations into Kashmir. Curiously enough, Secretary-General U Thant instead of asking Pakistan to stop the infiltrations, simply asked both India and Pakistan to exercise utmost restraint. Being disappointed India asked the Secretary-General to publish the report of General Nimmo. This request was also not complied with. U Thant, on the other hand, issued a statement on August 24, describing the situation in Kashmir as a dangerous threat to peace and re-called General Nimmo to the UN headquarters for consultation. Encouraged by the inactivity of the UN, Pakistan launched a

massive attack on India on September 1. Even then, the UN did not rise to the occasion. On September 4, the Security Council passed a resolution calling for an immediate cease-fire in Kashmir and demanding withdrawal of Indian and Pakistani forces behind the cease-fire line of 1949. The resolution also requested the Secretary-General to report to the Council within three days on the implementation of this resolution. India reiterated in a reply to the Security Council resolution of September 4, that immediate cease-fire could be brought about only when Pakistan vacated aggression and stopped infiltration across the international border and the Jammu and Kashmir cease-fire line respectively. The UN Security Council adopted a fresh resolution on September 6, calling upon the parties to cease hostilities in the entire area of conflict immediately, and promptly withdraw all "armed personnel" back to the positions held by them before August 5, 1965. Meanwhile, Secretary-General U Thant flew to the capitals of India and Pakistan and conferred with Prime Minister Shastri and President Ayub Khan. On the eve of his departure for New York, U Thant confessed that he had failed in his mission to bring about a cease-fire but said that he would continue to work for a cease-fire and a peaceful solution of the problem. Finally, on September 20, 1965 the Security Council adopted a third resolution which succeeded in bringing about a cease-fire in the Indo-Pakistan sub-continent. The resolution was tabled by Mr. J. G. De Beus of the Netherlands. The vote was 10 in favour, none against and one abstention (Jordan). It demanded "that a cease-fire should take effect on Wednesday, September 22, 1965 at 07.00 hours G.M.T. (12-30 hours I.S.T.) and calls upon both the Governments to issue orders for a cease-fire at that moment and subsequent withdrawal of all armed personnel back to the positions held by them before August 5, 1965."

Cease-fire Enforced—On September 22, Prime Minister Shastri told the Parliament that India was prepared to order a "simple cease-fire and cessation of all hostilities" from 12-30 p.m. on September 22, but Pakistan upset the time schedule by delaying the acceptance of the cease-fire resolution. Finally, cease-fire was enforced at 3-30 a.m. on September 23. Pakistan's acceptance of the cease-fire proposal, however, proved to be a farce. Because they continued to violate our frontier incessantly even after September 22, India made formal complaint to the UN and at the same time repulsed all Pakistani efforts to intrude again into our territory.

New UN Commander Named—Major General Bruce Macdonald of Canada was named as Commander of the United Nations' India and Pakistan Observers' Mission. U Thant told the Security Council that initially a team of at least 100 military observers with necessary logistical and staff support would be required to supervise the cease-fire and the withdrawal of troops by India and Pakistan to positions they held prior to August 5. In India, the headquarters of the military observers would be located at Jullunder; on the Pakistani side it would be at Lahore. U Thant

nominated General Marambio of Chile to be his representative to negotiate with India and Pakistan on withdrawals of all armed personnel to pre-August-5 positions as called for by the Security Council. India told the Secretary-General that the question of withdrawal of Indian troops under the Security Council resolutions could only come after Pakistan was "made to observe the cease-fire". In a letter to U Thant, India's Ambassador to U.N., Mr. G. Parthasarathi made it clear that India would accept no attempt to restrict the scope of the Security Council's call for the withdrawal of armed personnel as had been done in U Thant's identical telegram to India and Pakistan. Indian representative also rejected U Thant's interpretation that the withdrawal "to positions held on August 5" meant "identifiable military positions of some nature which prior to August 5, have presumably been occupied by some kind of armed personnel under Government control and/or direction."

India's view was that she could not withdraw her troops from presently held positions unless Kashmir Valley was cleared of the last infiltrator from Pakistan. General Marambio convened his first meeting of the top military officers of India and Pakistan on January 3, 1966 in Lahore to discuss the question of withdrawals of armed personnel of both the countries to August-5 positions.

ANTI-HINDI AGITATION

A widespread agitation all over India, particularly in the South, followed the decision of the Central Government to replace English by Hindi as the official language on and from January 26, 1965 in accordance with the provisions of the Constitution. It was, however, assured that English might continue to be used for official purposes even after adoption of Hindi as the official language. This announcement of the Central Government raised serious doubts in the minds of the non-Hindi-speaking people who thought that Hindi was being imposed on them and they would be in a serious position of disadvantage as to recruitment in Central Government services. Moreover, it was argued that adoption of Hindi for all official purposes would prejudice the use and development of other regional languages being recognised as national languages in the Constitution.

The agitation took a serious turn in Madras. The separatist Dravida Munnetra Kazhagam (D.M.K.) party observed the Republic Day as a "Day of mourning". Three persons burnt themselves to death as self-immolation to protest against the imposition of Hindi. There were a series of demonstrations and strikes by the students in Madras on the eve of the Republic Day resulting in the death of two students by police firing. There were also large-scale arrests. The Prime Minister of India tried to assuage the feelings of the non-Hindi-speaking people by saying that English would continue to be the associate language and would be freely used in Madras as envisaged in the Act of the Parliament. He also said

that approval of Hindi as an alternative medium for competitive examinations would depend on the approval of the Chief Ministers of the non-Hindi-speaking States. Congress President Kamaraj recalled the assurances given by Mr. Nehru and appealed to the people of the Hindi-speaking areas to go slow. All these assurances went in vain. People in the non-Hindi-speaking States wanted Constitutional guarantee of their rights as had been promised by Mr. Nehru from time to time. As this was not forthcoming from the Central Government, agitation began to spread all over the South and also to some States in the eastern region. In February, disturbances in Madras took a violent turn in which 4 policemen were murdered by frenzied mob. Police firing in 21 towns killed over 50 people. Many public buildings were set on fire. Trains, buses and police stations were attacked. Over 10,000 people, including 300 students, were arrested. Agitation spread to the adjoining States of Andhra, Mysore, Kerala, Pondicherry and also to West Bengal. In Pondicherry, 6 people and in Andhra, 2 people were killed by police firing. Two Central Ministers, Mr. C. Subramaniam and Mr. O. V. Alagesan tendered their resignations which they withdrew on February 10 after talks with Mr. Shastri. Demands were voiced by the members of Parliament to make statutory provisions with regard to the assurances given by Mr. Nehru (See also *Languages Section*).

Decision of the Congress Working Committee—Under the shadow of these agitations, the Working Committee of the Congress party met in New Delhi on February 22-23. The main features of the resolution passed by the Working Committee were as follows: (1) Greater attention should be paid to the use and development of Hindi and all other national languages in co-operation with the State Governments; (2) Firm resolve to adhere to the assurances given by the Late Prime Minister Mr. Nehru; (3) Immediate steps should be taken to implement the three-language formula; (4) Examinations for the All-India services should be held in Hindi, English and in the principal regional languages and the candidate should be given option to use any of these languages; (5) Steps should be taken, including amendments to the Official Languages Act of 1963, to give effect to the assurances given by Mr. Nehru. After this, the Anti-Hindi Agitation Council of Madras called off its campaign.

ELECTIONS IN KERALA

Kerala was under President's rule since September 1964 following the defeat of the Congress Ministry headed by Chief Minister Mr. Shankar. Fresh elections for the State Assembly were held on March 4, 1965. In the 133-member Assembly, party positions were as follows:—Communist (Left): 40; Congress: 36; Kerala Congress: 23; S.S.P.: 13; Muslim League: 6; Communist (Right): 3; Swatantra: 1; Karshaka Thozilali Party: 1; Independents: 10; The striking feature of the elections was

that the ruling Congress party failed to get a working majority and the Left Communists became the largest single party with 29 of their candidates having been elected from behind the prison bars. Mr. E. M. S. Namboodiripad, the Left-Communist leader claimed that his party was in a position to form a ministry with the help of Muslim League and the S.S.P. Muslim League, however, withdrew their support from any possible Government by the Left Communists. The S.S.P. stated that they would take a responsive attitude towards a Communist Ministry if formed. Mr. V. V. Giri, the then Governor of Kerala, after consultations with various party leaders, reported to the President that no party was in a position to form a stable ministry and therefore recommended that President's rule should be extended in the State. Accordingly, President's rule was reimposed in Kerala on March 24, 1965.

C. B. I. PROBE IN ORISSA

Serious charges of corruption and malpractices were made by the public against the Government of Orissa, particularly against Mr. Biren Mitra, the Chief Minister and Mr. Biju Patnaik, a former Chief Minister. There was also widespread students' demonstrations. Considering the seriousness of allegations, the Central Intelligence Bureau was asked to make a probe into the whole affair. The C.B.I. report was submitted to the Government in October 1964. The report was referred to a Cabinet Sub-committee consisting of Mr. Nanda, Mr. Chavan and Law Minister Mr. A. K. Sen. The Sub-committee commented that the manner in which Mr. Patnaik and Mr. Mitra had conducted the Government transactions was "definitely not in keeping with the normal standards of public conduct." After the findings of the Sub-committee, Mr. Biren Mitra, the Chief Minister resigned from the office on February 1, 1965. But this did not assuage the indignant feeling of a section of the members of Parliament who wanted the C.B.I. probe report to be placed on the table of the Lok Sabha. Mr. H. V. Kamath sprang a surprise by producing copies of reports of the Cabinet Sub-committee and the CBI in the Lok Sabha on March 3. The Government having refused to discuss the report, the Opposition moved a no-confidence motion in the Government for its mishandling of Orissa affairs. But the motion was defeated on March 16.

ASCENTS OF MT. EVEREST

Indian mountaineers made an "Everest Hat-trick" in 1965 under the leadership of Lt-Commander M. S. Kohli. The team consisting of all Indian members left Delhi on February 22 and the first ascent of the glorious peak was made on May 20, by Captain A. S. Cheema and Mr. Nawang Gombu. Gombu is the first man to reach the highest peak in the world twice. He scaled the summit previously in 1963 with James Whittaker of the American Expedition. The second ascent was made on

May 22 by Sonam Gyatso, a Sikkimese and Sonam Wangyal, a Kashmiri. The third ascent was made by C. P. Vohra and Ang Kami, a Sherpa who is the younger brother of Nawang Gombu. Yet another and the fourth successful ascent of the Everest was made by Captain H. S. Ahluwalia, H. C. S. Rawat and Phu Dorji, a Nepalese national. Previously India made two other expeditions which narrowly failed to reach the summit—one in 1960 when three of its members climbed upto 28,330 ft., only 700 ft. below the summit and the other in 1962 when due to extremely bad weather, the attempt was abandoned at 28,600 ft.

PAKISTAN'S ATTACK IN KUTCH AREA

Pakistan made a probing attack on India's border in the Rann of Kutch in April 1965 before she jumped into the misadventure of massive attack on Kashmir later. Armed with American tanks and jets, Pakistan deliberately disturbed the *status quo* on the Kutch-Sind border. The attack on our border post at Sardar began on April 9. The Government of India immediately instructed the Chief of the Army Staff to take over operational control of the border and give the Pakistani intruders a fitting reply. India also informed the Security Council of the U.N. and other friendly nations of the unprovoked attack by Pakistan on her territory. At the same time the Prime Minister declared that India was ready to discuss border problems with Pakistan provided the intruders vacated their aggression on Kanjarkot and other posts held by them. Because of Pakistan's intransigence, talks could not be held and fighting went on in the border areas for a number of days during which Pakistan received severe blow from our troops. India proved it with facts and documents that Pakistan had no claim on any area in the Rann of Kutch and the boundary was well defined. The British Prime Minister Mr. Wilson took upon himself to solve the problem by initiating a proposal of cease-fire. President Johnson also deplored the fighting and hoped that the conflict would be settled by negotiation. Supporting India's stand, the Soviet Prime Minister Mr. Kosygin declared in unmistakable terms that Pakistan must restore the *status quo ante* in Kutch and pave the way for peaceful settlement of the dispute. Meanwhile, the British Prime Minister continued his efforts to bring about a cease-fire. Consequently, India and Pakistan signed a cease-fire agreement on June 30, simultaneously in New Delhi and Karachi. The agreement was to be followed by a meeting of the officials of the two Governments for settlement of the dispute. Later the talks should be at ministerial level, failing which within two months of the cease-fire, the issue should be referred to an independent tribunal with one representative from each of the Governments and a chairman to be jointly selected by the two Governments. If the two Governments fail to agree on the selection of the chairman, they shall request the Secretary-General of the U.N. to nominate a chairman within three months of the

cease-fire. The decision of the tribunal shall be binding on the two Governments. The first meeting of the ministers of the two Governments scheduled to be held in New Delhi in August, was cancelled in view of Pakistan's fresh attack on Kashmir.

MIZOS DEMAND SEPARATE STATE

The Mizo tribal leaders in a convention held in Kawnpuri in Assam in January 1965, demanded the creation of a separate State called *Mizoram* by integrating all the territories inhabited by the Mizos into one administrative unit. The convention was attended by about 30 leaders representing 14 political parties of various Mizo tribes from Manipur, Tripura, Nagaland, Mizo Hills district, North Cachar Hills district and Cachar Plains district. The Mizo Hills cover an area of about 8,000 sq. m. with a population of just over 3½ lakhs.

GOA MERGER VOTES

A non-official resolution was passed by the Goa, Daman and Diu Legislative Assembly in January 1965, recommending to the Government of India to take appropriate steps for the merger of Goa in Maharashtra and Daman and Diu in Gujarat without any further delay. The Congress Working Committee, in a resolution decided that the next general elections in Goa should be held to ascertain the wishes of this issue of merger. Mysore which is a claimant of Goa, deplored the decision of the Working Committee by saying that historically, socially and culturally Goa belonged to the Kannada people of Mysore. They also alleged that the Congress High Command had acted under pressure from Maharashtrian members of the Cabinet in which, they pointed out, there was no representative from Mysore after the death of Mr. H. C. Dasappa. The fate of Goa will now be decided at the next elections in which Maharastrians will undoubtedly carry the day.

SOVIET AID TO INDIA

Soviet Prime Minister Mr. Kosygin declared during the visit of our Prime Minister in May that his country would give at least double the aid to India for its Fourth Plan as compared to what it gave for the Third Plan. Mr. Ashoka Mehta, Deputy Chairman of the Planning Commission gave an outline of the Soviet aid programme after his visit to the Soviet Union. The aid promises are as follows:—*Steel*: Expansion of steel production at Bhilai from 2.5 million tonnes to 3.5 million tonnes. The construction of the second phase of Bokaro steel plant upto 4 million tonnes capacity. *Coal*: Expansion of the existing coking coal mines to serve the needs of Bhilai and Bokaro steel plants with additional production of 11 million tonnes of coking coal. *Iron Ore*: Development to two new mines and expansion of upto any additional capacity of 6.5 million

tonnes. *Petroleum* : Soviet Union is to provide for a major part of Rs. 75 crores of foreign exchange on oil exploration. Besides, it would be willing to help in setting up a third refinery. *Power* : Assistance for developing hydro and thermal power to the extent of 600 MW. *Non-Ferrous Metals* : Assistance to *Korba Project* for the manufacture of aluminium alloys and to Rakha copper mines.

SHEIKH ABDULLAH'S ANTICS

Sheikh Mohammed Abdullah and his party went on tour of Middle Eastern countries, presumably for the purpose of Haj pilgrimage. But during the tour, his activities and utterances showed that he misused the facilities given by the Government of India to undermine our country in the estimation of friendly nations of Africa and Arab world. Moreover, he hobnobbed with the officials of Pakistani embassies wherever he met them during his tour. He also put forward his pet theme of independent Kashmir and criticised India for "her failure to ascertain the wishes of Kashmiri people" for solution of the problem. To add to this, Abdullah met the Prime Minister of China, Mr. Chou en-Lai in Algiers on March 31, 1965. The Government of India cancelled all endorsements on the passports of Sheikh Abdullah and his party other than those necessary for Haj pilgrimage and asked him to return to India as soon as possible. On their return to India on May 8, 1965, Sheikh Abdullah and his lieutenant Mirza Afzal Beg were served with notices under the Defence of India Rules, requiring them to proceed immediately to Ootacamund and to remain there within the municipal limits of that town. On July 14 Abdullah was transferred to Kodaikanal and housed in a private bungalow.

WORST COLLIERY DISASTER

In the worst mining explosion in India, more than 267 people were killed in the Dhori colliery in Hazaribagh district. The explosion occurred on May 28, 1965. According to the Chief Inspector of Mines, the explosion had been caused by the sudden influx of gas into coal dust. The Union Government set up a court of enquiry to investigate into the causes and circumstances of this mine explosion. The court held the management responsible for the cause of explosion.

P.S.P. BREAKS AWAY FROM S.S.P.

A majority of the leaders of the former Praja Socialist Party broke away from the Samyukta Socialist Party at the founding conference of the S.S.P. held in Banares on January 29, 1965. Mr. H. V. Kamath and 14 other leaders of the former P.S.P. announced the annulment of the merger. Two leaders, Mr. S. M. Joshi, Chairman of the S.S.P. and Mr. Chandrasekharan remained with the S.S.P. After the withdrawal of the dissident P.S.P. leaders, the conference adopted a resolution which

refused to accept the annulment of the merger by saying that the S.S.P. P.S.P. merger in June, 1964 was not tentative but complete and final.

SARDAR KAIRON ASSASSINATED

Sardar Pratap Singh Kairon, former Chief Minister of Punjab was shot dead by unknown assailants on February 6, 1965 on the Grand Trunk Road, near Rasoi village 19 miles from Delhi. Mr. Kairon was travelling in a car from Delhi to Chandigarh. His travelling companion, Mr. Baldev Kapur, Director of Evaluation in the Punjab Government and his chauffeur were also killed by the gunmen who waited for them by the road side. Sardar Kairon resigned in June, 1964 after the Das Commission had found that his sons had exploited their father's position for personal gain. Mr. Sucha Singh, believed to be the leader of the gang responsible for the murder, was arrested in March by Indian police on Nepalese territory. The case of his extradition from Nepal is still going on in a Nepalese court.

KASHMIR NATIONAL CONGRESS MERGER

At a convention held in Srinagar on June 27, 1965, the Kashmir National Conference, ruling party of the State decided to dissolve itself and join the Indian National Congress. In a letter to the National Conference leaders, Mr. Gulzarilal Nanda said that the National Conference had the same ideal and objective as the Indian National Congress. Since a branch of the A.I.C.C. had been opened in the State, it would be in the fitness of things that all Conference workers join it. Mr. Mir Kasim became the State Congress Chief.

SHASTRI'S SUDDEN DEATH

Mr. Lal Bahadur Shastri, India's second Prime Minister suddenly passed away at Tashkent in U.S.S.R. on January 11, 1966. He was 61. Mr. Shastri went there at the invitation of the Soviet Prime Minister Mr. Kosygin to talk peace with President Ayub Khan of Pakistan. His death came of heart failure a few hours after signing the famous Tashkent declaration envisaging peace and amity with Pakistan.

Mr. Shastri assumed office on June 9, 1964. His tenure of office for about 19 months as the Prime Minister of India will be remembered as one of dedication and determination to uphold the dignity of our people in the face of gravest crisis. Mr. Shastri died at the peak of his glory. Even President Ayub gave him the warmest tribute by saying that Mr. Shastri died for peace.

Mr. Gulzari Lal Nanda, the Home Minister was sworn in by the President as the acting Prime Minister in the early hours of January 11 immediately after receipt of the news of Mr. Shastri's sudden death.

Mr. Shastri's body was flown to New Delhi the same day. Soviet Premier Mr. Kosygin, Pakistani President Mr. Ayub Khan and Soviet Foreign Minister Mr. Gromyko were among his pall bearers. The Soviet premier accompanied the dead body in a separate plane and was present during the cremation. He also addressed a meeting on the Ramlila Maidan in Delhi, in which he paid a moving tribute to Mr. Shastri. Among others who accompanied the dead body were Mr. Ghulam Faruque, Pakistani Minister for Commerce and Mr. Arshad Hussain, High Commissioner for Pakistan in New Delhi. Among the dignitaries present during the funeral and cremation were the following : Mr. Hubert Humphrey, the U.S. Vice-President, Mr. Dean Rusk, the U.S. Secretary of State, Prof. J. K. Galbraith and Mr. Sherman Cooper, two former U.S. ambassadors to India, the Vice-President of U.A.R., the Prime Minister of Afghanistan, Lord Mountbatten (representing the Queen of England), Mr. George Brown, Deputy Prime Minister of the British Government, an envoy representing the French President, the Deputy Prime Minister of Yugoslavia, etc.

His cremation took place on January 12, on the banks of the river Jamuna, barely 150 yards from Shanti Vana, Mr. Nehru's resting place.

INDIA IN WORLD POLITICS

INDIA AIDS OTHER COUNTRIES

India provided technical assistance to other countries under the Colombo Plan since its inception, which totalled about Rs. 1.6 crores. Training places were provided by India to the following countries as shown :—Australia : 3, Burma : 67, Cambodia : 2, Ceylon : 258, Indonesia : 61, Japan : 10, Korea : 8, Laos : 12, Malaysia : 113, Maldives Islands : 17, Nepal : 1,673, New Zealand : 2, Pakistan : 39, Philippines : 147, Thailand : 150, and Vietnam : 27. During 1963-64, 284 trainees from different countries came to India. India also provided the services of experts to various countries.

INDO-BURMA RELATION

General Ne Win, Chairman of the Revolutionary Council of Burma came on a state visit to India in February 1965. After the visit, a joint communique was issued in New Delhi by the General and the Prime Minister of India, in which they expressed their determination to further strengthen and develop the good-neighbourly relations now existing between the two States. They re-affirmed their dedication to the cause of peace and freedom in the world. They expressed their desire to expand trade and commerce between the two countries. The Prime Minister of

India offers facilities for training Burmese nationals in the atomic-energy establishments of the Government of India. The Burmese leader assured the Prime Minister that there would be no discrimination against the Indians under the nationalisation laws and the resident foreigners who could play an useful role in the new social order of Burma, would be given facilities to live and work in Burma as citizens.

INDO-FRENCH CO-OPERATION

The French Premier Mr. George Pompidou visited India for three days in February 1965. He held talks with the Prime Minister and other leaders of India. It was the first official visit of a French Premier in India. In a joint communique issued by Mr. Pompidou and Mr. Shastri, greater stress was given on closer cultural and economic co-operation between the two countries. It was agreed that commercial co-operation should expand between France and India. The French Premier appreciated the stand taken by India on Vietnam War. Mr. Pompidou was also apprised of our stand on Kashmir problem. A cultural agreement between the two countries has been signed, which includes provision for scientific and technological co-operation.

CHINA'S WAR-LIKE POSTURES

All through 1965, Peoples' Republic of China maintained its war-like posture towards India. To add to her hostile attitude to India, China and her new-found ally Pakistan signed a boundary protocol in March 1965 when President Ayub Khan accompanied by his foreign minister Mr. Bhutto, visited Peking. The Government of India immediately sent a note of protest to Peking maintaining that Pakistan and China had no common border and that presence of Pakistan in northern Kashmir was based on aggression and illegal occupation of Indian territory. India also made it known to the Government of China that the so-called boundary demarcation of Jammu and Kashmir with Sinkiang was in violation of International law. During Pakistan's aggression on India in September, China wanted to bring pressure on India by serving a bogus ultimatum. The ultimatum received in New Delhi on September 17, 1965, demanded "that the Government of India dismantle all its military works on the Chinese side of the China-Sikkim border within three days, immediately stop all its intrusions along the Sino-Indian border, return the kidnapped Chinese border inhabitants and the siezed livestock. Otherwise the Government of India must bear the full responsibility for all the grave consequences." India scornfully repudiated all these preposterous and fabricated charges but reiterated at the same time for the sake of peace the proposal for joint inspection and if any structures are found on the Tibet side of the border, there can be no objection to their being demolished. Strangely enough, before the expiry of the period of

ultimatum, the Chinese Government extended the time limit by 72 hours. On September 22, coinciding with the cease-fire announcement of the Indo-Pakistani conflict China backed out of its so-called ultimatum by announcing that India had demolished "56 military works" allegedly built on the Chinese side of the border. But Chinese pressure tactics continued unabated with land and air intrusions all along the Sino-Indian border. The Government of India took all steps to counteract these provocative measures. In fact, Defence Minister Chavan assured the Lok Sabha that mistakes of 1962 would not occur again.

CZECHOSLOVAKIA SUPPORTS INDIA

The Prime Minister of Czechoslovakia, Mr. Josef Lenart visited India in March, 1965. India and Czechoslovakia are collaborating in various economic, political and cultural fields. The visit of the Czech Premier further strengthened the bond of friendship between the two countries. The Czech Premier reiterated his country's support to India's stand on the Kashmir question and expressed the desire that the existing differences between India and Pakistan would be solved by peaceful means and by negotiations between the two countries and without any external interference.

INDIA JOINS SATELLITE COMMUNICATION SYSTEM

India has decided to join the global satellite commercial communication system. The system is being established jointly by signatory countries. An experimental station is being set up at Ahmedabad to facilitate the participation. The first satellite called the "Early Bird" is already in space. It is expected to be available for commercial purposes, providing 240 telephone circuits after a short experimental period. India's full participation will cost at least Rs. 3 crores.

INDIA AT AFRO-ASIAN SOLIDARITY CONFERENCE

A non-official Indian delegation joined the fourth Afro-Asian Solidarity Conference held in Ghana in May, 1965. India exposed China's game at the Conference in which her attempt to elect Pakistan as Vice-President of the Conference failed twice. India pledged continuous and whole-hearted support for the struggle of the Africans against the fascist and racist regimes in South Africa, South-West Africa, the Portuguese colonies and against the 'white' dictators of Southern Rhodesia. India's stand was highly acclaimed.

U. N. NUCLEAR SHIELD PROPOSED

India made a bold proposal in the Disarmament Commission in May 1965, which envisaged that U.N. should undertake to safeguard the security of the countries which might be threatened by the nuclear powers.

To check proliferation of nuclear weapons, India listed the following measures for proposed accord: (a) An undertaking by the nuclear powers not to transfer nuclear weapons or its technology to others; (b) An undertaking not to use nuclear weapons against those countries which did not possess them; (c) A comprehensive test-ban treaty and a complete freeze on the production of nuclear weapons and means of delivery as well as substantial reduction of existing stocks; (d) An undertaking by non-nuclear powers not to acquire or manufacture nuclear weapons.

INDIAN MISSION RECALLED FROM RHODESIA

India cut off diplomatic relations with Southern Rhodesia as a protest against the seizure of independence by the 'white' minority. Our mission in Salisbury was withdrawn in May 1965, when Mr. Ian Smith's regime was preparing for the illegal U.D.I. India's High Commissioner in Salisbury wrote a letter to the Governor before leaving that country, stating therein that Indian diplomatic mission is being withdrawn as a protest against the attitude of the 'white' minority towards the people of Rhodesia and also as a mark of solidarity with the people of Rhodesia struggling for the vindication of their rights.

SHASTRI VISITS CANADA

Prime Minister Lal Bahadur Shastri paid an official visit to Canada in June, 1965. The visit was a fruitful one. Both the countries are co-operating with each other in various fields. Canada's Prime Minister, Mr. Lester Pearson reiterated Canada's deep and continuing interest in the economic development of India and in the success of India's Five-Year Plans. In the joint communique issued by the two Prime Ministers, widest possible areas of agreement were covered to the mutual benefit of the two countries. They recognised the responsibility of both the developed and the developing countries to co-operate in the task of raising the standards of living in the developing countries. The Prime Minister of Canada expressed satisfaction at India's decision not to use nuclear energy for other than peaceful purposes. He also expressed the hope that China would agree to the proposal of the six non-aligned countries, formulated in Colombo in 1962 and begin negotiation with India for peaceful settlement of the border problem.

INDIA AND WEST ASIA

India has very friendly relations with the Arab countries of West Asia. To further strengthen the bond of friendship, Dr. Zakir Hussain, the Vice-President of India made a goodwill tour of some countries of West Asia and Greece in May and June 1965. He visited Greece, Kuwait,

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Saudi Arabia, Jordan and Turkey. In these Muslim countries, Pakistan often makes propaganda against India with regard to Kashmir and Muslim minorities in our country. Our Vice-President, himself a Muslim by religion, brought home to the Muslim leaders of those countries that India is a secular country based on democracy, where all religious groups stand on equal footing. His tour made a good impression and a clearer image of democratic and non-aligned India was placed before the Arab people who in turn expressed their eagerness to have closer relationship with the largest democracy in the world.

DR. RADHAKRISHNAN SUGGESTS AFRO-ASIAN FORCE FOR VIETNAM

Having been concerned with the grave deterioration of events in Vietnam, President Dr. S. Radhakrishnan suggested in April 1965, the policing of the boundaries between the two Vietnam by an Afro-Asian force. He said that events in Vietnam, if not checked, might turn into a wider conflict. So to check the drift, he asked for cessation of hostilities in both parts of Vietnam, policing of boundaries by an Afro-Asian force and maintenance of the present boundaries so long as people desired it. The Prime Minister also called for immediate negotiations on Vietnam without any condition and asked the U.S.A. to stop bombing the North Vietnam territory as a precondition for such talks.

INDO-NEPALESE RELATION

Last year has seen better understanding between India and Nepal with frequent visits by dignitaries of both the States, including the King and the Prime Minister of India. In April 1965, Prime Minister Shastri visited Nepal for three days. King Mahendra came on a 25-day State visit to India in December 1965. Mr. Shastri, accompanied by the King and Queen of Nepal, visited the Kosi Barrage which the King inaugurated. The Prime Minister laid the foundation of the Western Kosi Canal. These two projects are symbolic of the joint efforts of the two countries. Both the King and the Prime Minister expressed their determination to continue to strengthen this bond of co-operation. They also re-affirmed their faith in the policies and principles of non-alignment and peaceful co-existence.

SHASTRI VISITS USSR

Prime Minister Shastri renewed our closer contact with the Soviet Union by paying an official visit to the U.S.S.R. for 9 days in May 1965. It was his first visit to Russia. During his stay, the Prime Minister visited Moscow, Leningrad, Kiev and Tashkent. Wherever they went the

Prime Minister and his party received tumultuous welcome from the people of Russia. He also participated in a mass rally of Indo-Soviet friendship held in the Kremlin. He had talks with Mr. Brezhnev, First Secretary of the C.P.S.U., Mr. Kosygin, the Prime Minister, Mr. Mikoyan, the then President and other leading statesmen. The joint communique published after the talks showed wide range of co-operation and agreement between the two great States of the world on various problems and their determination to strive for peace and freedom for all peoples of the world. The Soviet Union gave unstinted support to the non-aligned policy of peace and co-existence followed by India. On all major international problems, viz., disarmament, banning of all nuclear weapons, strengthening the U.N., the war in Vietnam and the struggle of the African people against colonialism—the two countries showed agreement. The Government of U.S.S.R. welcomed the decision of the Government of India not to manufacture atom bomb but to use the atomic energy only for peaceful purposes. The leaders of the two countries also agreed to develop Indo-Soviet relations on the basis of equality, mutual benefit and respect for sovereignty. The Soviet Union also expressed its willingness to continue economic and technological co-operation during India's Fourth Five-Year Plan Period and other specific enterprises, viz., steel, mining and oil industries etc. Both sides expressed their satisfaction at the strengthening of cultural and scientific ties between the Soviet Union and India and recognised the need for their further development.

SHASTRI AT THE COMMONWEALTH CONFERENCE

Prime Minister Shastri attended the Commonwealth Prime Ministers' Conference held in London in June 1965. He put forward before the August assembly India's view on international affairs. He dealt with specific areas of tension, viz., Vietnam and explained India's stand on peaceful settlement of the Vietnam problem by negotiation. He said that to create a proper atmosphere for talks on Vietnam, U.S.A. must, first of all, stop bombing North Vietnam territory. It was also India's view that Vietnamese people must be allowed to decide their future without external interference. His analysis of the need of developing nations of Asia was highly appreciated. In regard to China, Mr. Shastri said that in spite of India's gesture to live in peace with her neighbour China, the Government in Peking had taken a path which menaced her neighbours. All efforts of India to reach a peaceful settlement with China in accordance with the Colombo proposals had failed. He reminded the Prime Ministers that the main task of India and the Asian countries was to create a better living standard for their peoples. In this great task, the Commonwealth and the developed countries outside could help, he said. Mr. Shastri's exposition created a favourable impression on the leaders assembled.

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INDIA AND YUGOSLAVIA

The tie of friendship that already existed between India and Yugoslavia was further strengthened by the visit of our Prime Minister to Yugoslavia, which took place in July 1965 at the invitation of the President of Yugoslavia Marshal Tito. The Prime Minister was accompanied by the Foreign Minister Sardar Swaran Singh and other officials. The two leaders exchanged views on the international situation and noted with concern the grave threat to peace and security, particularly due to the events in Vietnam and the machinations of the colonialists in some parts of Africa and Asia. They re-affirmed their faith in the UN as the proper forum to deal with all international disputes and guaranteeing the sovereign rights of the peoples. The attitude of the non-aligned nations expressed in the Cairo Conference was hailed by them. Both sides considered that the basic cause of international tension is the conspiracy of the imperialists to keep under subjugation the peoples of the world who are fighting for freedom. The identical views on all major world problems held by the President and the Prime Minister of the two countries underlined once again the unbreakable bond of friendship that binds the peoples of these two non-aligned countries.

INDO-PAKISTANI RELATIONS

The relations between India and Pakistan worsened during 1965 due to two major unashamed attacks made by Pakistan on Indian territory, viz., one in the Rann of Kutch and the other in Kashmir (These two attacks have been dealt with separately in a previous chapter). Besides this blatant aggression on our territory, Pakistan continued to harrass us as before by driving away the minorities, violating the borders and by infiltrations and espionage.

STATUS OF KASHMIR

Pakistan objected to the U.N. Security Council against India's action in extending Articles 356 and 357 of the Indian Constitution to Kashmir. Indian representative in the UN, Mr. B. N. Chakravarty totally rejected the contention of Pakistan by saying that the decision had been taken by the President of India at the request of the legally elected Government of Jammu and Kashmir. It is merely an exercise of the responsibility which inheres in the Government of India. There can be no change in the status of Jammu and Kashmir which has become an irrevocable part of the Indian Union. The application of the said Articles of the Constitution was purely an internal affair falling under the domestic jurisdiction of India and Pakistan has nothing to do with it.

FUTURE OF ENCLAVES

Complications arose last year with regard to access facilities to the residents living in enclaves held by India in East Pakistan. Pakistan continued firing across the border to block entry of Indian officials into those enclaves opposite Cooch Behar in West Bengal. After 14 days of Pakistani firing, a cease-fire was effected on March 31, 1965. A four-point plan offered by India was accepted by Pakistan. The plan was as follows: (1) Immediate stoppage of firing across the border; (2) Transit facilities for the residents of Dahagram and the Pakistani officials through Indian territory would be given if they apply; (3) Early meeting of the Chief Secretaries of East Pakistan and West Bengal Governments; (4) Transit facilities for residents living in each other's enclave should be granted. There are 123 Indian enclaves and 74 Pakistani enclaves in each other's territory.

EXODUS OF PAK MINORITIES

The Committee of Enquiry appointed by the Indian Commission Jurists held that the communal disturbances in East Pakistan in 1964 was Government inspired. It was a clear case of genocide whose responsibility squarely lay on the Pakistani Government, they said. The Committee was headed by Mr. Purushottamdas Trikumdas. According to the Committee, the total number of refugees who arrived in India in 1964, was about 870,000. Of these, 48,000 were Christians and 21,000 Buddhists. In all, 5.5 million non-muslims had migrated from East Pakistan since 1946, the Committee said. At the time of partition their number was 13 million. Allowing for a natural increase of a million "only about 8.5 million are left in East Pakistan". The Government of India has also appointed a Commission under the Chairmanship of Justice Kapur to enquire into the causes of exodus of minorities from East Pakistan. The Commission is still collecting evidences.

OVERFLIGHT BY PAK PLANES BANNED

After Pakistani attack on the Rann of Kutch area, the Government of India banned overflights of Pakistani military aircraft over Indian air space. When afterwards Pakistan mounted a major attack on India in the Kashmir sector, civilian air flights between the two countries were also cancelled. Pakistan siezed offices of the IAC in Dacca.

PAK ASSTT. HIGH COMMISSION IN SHILLONG CLOSED

The Government of India asked the Government of Pakistan to close their office of the Assistant High Commissioner in Shillong by June, 1965 in view of the anti-Indian and subversive activities of the personnel there. While demanding this, the Government of India also reminded the Govern-

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ment of Pakistan that they unilaterally asked to close the office of the Assistant High Commissioner for India in Rajshahi in November 1963, which was established on reciprocal basis. The Government of India requested over and over again to allow their office at Rajshahi to be reopened. Pakistan having refused, the Government of India was forced to take this decision.

DEPORTATION OF PAK INFILTRATORS FROM ASSAM

The Government of India took a serious view of the increasing number of Pakistani infiltrations into Assam, Tripura and West Bengal. Of these, the problem was acute in Assam. According to 1961 census, nearly 10 lakhs of Pakistani Muslims infiltrated into the eastern States of India during 1959-61. The Government of India set up a tribunal to consider and scrutinise the cases of infiltrators under the Foreigners' (Tribunals) Order, 1964. Under the law, a person on whom the 'Quit India' notice is served has the opportunity to represent his case before the tribunal. The Chief Minister of Assam said in July, 1965 that altogether 122,476 infiltrators out of a total of 220,691 had been deported from Assam by the end of June 1965.

THE TASHKENT DECLARATION OF PEACE

It was the finest hour in the life of India's late Prime Minister, Mr. Lal Bahadur Shastri when he signed the momentous Tashkent Declaration along with President Ayub Khan of Pakistan on January 10, 1966, a few hours before his death. The talks began at the initiative of the Soviet Premier Mr. Kosygin on January 4, in Tashkent, the capital of the Uzbek Republic of the Soviet Union. The main points of the historic declaration were as follows:

1. Armed personnel of both the countries will withdraw to the August-5 positions not later than February 25, 1966.
2. There will be repatriation of the Prisoners of War.
3. Both sides agree to continue meetings at the highest levels on matters of direct concerns to both.
4. Both the countries would base their relations on the policy of "non-interference in internal affairs of each other".
5. Normal functioning of diplomatic relations would be restored immediately with the High Commissioners returning to their posts.
6. Both sides would discourage any propaganda directed against the other and will encourage propaganda which promotes the development of friendly relations between the two countries.
7. Both sides would consider measures towards restoration of economic and trade relations, communication and cultural exchanges.
8. Both the countries will create conditions which will prevent the exodus of people from either side and will continue discussion of questions relating to the problems of refugees and eviction/illegal immigration.
9. Both sides will discuss the

return of property and assets taken over by either side in connection with the conflict.

After the declaration was signed Mr. Kosygin said that it would help strengthen Indo-Pak, Indo-Soviet and Pak-Soviet friendship. He hoped that the Tashkent Declaration would remain "a symbol of eternal friendship between India and Pakistan". The new Prime Minister Mr. Nanda, in his first broadcast to the nation, pledged to abide by every word of the declaration signed by Mr. Shastri. President Dr. Radhakrishnan in the funeral oration of the late Mr. Shastri said in his characteristic way that the Tashkent Declaration was not "a legal document. It is not a political settlement. It is not a moral exhortation. *It is a call to conversion.*"

INTERNATIONAL AFFAIRS

DEATH OF MR. CHURCHILL

Mr. Winston Churchill, wartime leader of Britain and twice Prime Minister died on January 24, 1965 at the age of 90. He was a member of the British Parliament for 63 years and held almost every high office in Great Britain. He was indeed an urdent defender of the British Empire and consistantly opposed India's struggle for freedom. But be it said that even as an opponent he was great. Churchill was honoured throughout the English-speaking world as a fighter, consolidator of allied victory and a superb writer of English prose. Let us quote one of his famous speeches made in the British Parliament on June 4, 1940: "We shall defend our island, whatever the cost may be. We shall fight on the beaches, we shall fight on the landing grounds, we shall fight in the fields and in the streets, we shall fight in the hills. We sall never surrender." In 1953, he was awarded the Nobel prize for literature.

IRAN'S PRIME MINISTER ASSASSINATED

The Prime Minister, of Iran, Mr. Hassan Ali Mansur was shot dead by a young man on January 21, 1965. The assassin was arrested on the spot. The assassin was a follower of the fanatic Muslim leader Ayatollah Khomeini. No foreign country was involved. Mr. Amir Abbas Hoveida became the new Prime Minister.

GAMBIA BECOMES A FREE NATION

Gambia became an independent nation on February 17, 1965 but decided to remain within the Commonwealth. Mr. David Jawara was elected the first Prime Minister of this new State. Gambia has an area of 4,000 sq. m.

with only 320,000 inhabitants. It is the smallest country in Africa. The British claim to have mercantile association with this area for the last 400 years. It became a British colony in 1843. Gambia was admitted as a member of the U.N. on.

AMERICAN ASTRONAUT WALKS IN SPACE

U.S. astronaut Edward White became the second man ever to walk in space when he left his Gemini spacecraft attached to a gold chord on June 3, 1965. The 34-year old Air Force Major crawled out of the spacecraft some 150 miles over the Pacific. Mr. White along with Mr. James McDivitt was sent into orbit for a successful 4-day flight.

ELECTIONS IN BRITISH GUIANA

Britain has promised independence to her colony in Guiana in May, 1966. But the political crisis in British Guiana with the virtual dismissal of the former Premier Dr. Cheddi Jagan is not yet over. Elections were held under proportional representation system in December 1964, in which the party positions were as follows: Peoples' Progressive Party (led by Dr. Jagan): 24; Peoples' National Congress (led by Dr. Burnham): 22; United Force: 7. The British Governor ousted Dr. Jagan from his office by saying that he has failed to attain absolute majority in the polls. Dr. Jagan complained that the elections were fraudulent. Nevertheless, the British Governor forced Dr. Jagan to vacate his office and swore in Mr. Burnham as the new premier. The United Force party representing communities other than the Indians and the Africans joined Mr. Burnham's ministry. The P. P. P. boycotted the new Assembly and also refused to take their seats. Dr. Jagan reiterated that the only way to keep the country together was a coalition of the major parties representing the two major races in Britain Guiana, viz., the Indians and the Africans. Without representation of the majority of the people the demand for partition would grow and create further problem, Dr. Jagan warned. In spite of this warning, the British Government is going to transfer power to the minority party in power.

MR. BANDARNAIKE'S GOVERNMENT DEFEATED

Ceylonese Government led by the world's only woman prime minister Mrs. Bandarnaike was defeated at the polls held in March, 1965. Results of the elections were as follows: United National Party: 66; Sri Lanka Freedom Party: 41; Federal Party: 14; Lanka Sama Samaj Party: 10; Sri Lanka Freedom Socialist Party: 5; Communist Party: 4; Tamil Congress: 3; People's United Front: 2; Independents and others: 6. Mr. Dudley Senanayake, leader of the U.N.P. formed a coalition Government on March 25. His cabinet consisted of 12 U.N.P. members, 3 S.L.F.S.P.

members, one each from the Federal Party and the People's United Front. The Tamil Congress did not join the ministry but promised its support.

CAMBODIA BREAKS DIPLOMATIC RELATIONS WITH U.S.A.

Cambodia severed diplomatic relations with the United States of America in May, 1965. Prince Sihanouk, the Head of State said that this action had been taken to show anger and indignation of the Cambodian people against American bombing of two Cambodian villages on April 28, 1965 and for publishing a slanderous article about the Queen of Cambodia in the American news magazine, "Newsweek". Cambodia renounced U. S. military and economic aid in 1963. The relations between the two States gradually worsened because of American opposition to Cambodian demand for a new Geneva Conference to guarantee Cambodian neutrality. U.S. aid was replaced by increased aid from China, France and the Soviet Union.

RHODESIA'S UNILATERAL DECLARATION OF INDEPENDENCE

The White minority regime in Rhodesia rebelled against Britain and declared itself independent on November 11, 1965 in the face of world-wide opposition. Britain retaliated by dismissing the ministry of Mr. Ian Smith. But this had little effect on the White regime, as Britain refused to use force to compel Mr. Ian Smith to quit office and come to the negotiation table for giving proper representation to the African majority in the administration of their country. In the U.N. Security Council, a resolution was adopted on Nov. 20, 1965, asking Britain to quell the White rebellion in Rhodesia and calling upon all countries to isolate Mr. Smith's Government by putting an embargo on trade with Rhodesia, including supply of oil and petroleum. The Organisation of African Unity bitterly criticised Britain for delaying action against the rebel regime and threatened that all member States of the OAU would cut off diplomatic relations with U.K. if she fails to use force against Mr. Smith's Government by Dec. 15, 1965. Accordingly, on Dec. 15, 1965, Guinea and Tanzania announced the severance of relations with Britain and the closing of the British embassy in their respective countries. On the next day, Ghana, Mali and U.A.R. broke off diplomatic relations with Britain over Rhodesian crisis.

LUNA-5 HITS THE MOON

There was yet another notable advance towards discovery of the outer space when the Soviet space rocket Luna-5 reached the moon's surface on May 12, 1965. But it could not make the soft landing as anticipated. The rocket hit the moon in the area of the "Sea of Clouds". Luna is expected to relay television pictures to the area in course of time, the Soviet scientists declared. On March 18, 1965, Soviet cosmonaut Alexi Leonov stepped out of his capsule for a 10-minute swim in the outer space. In

the field of space research, Russia and America went almost parallel during the last year as expected.

ARMY COUP IN CONGO

The crisis in the unfortunate land of former Belgian Congo deepened when General Mobutu, Commander of the Congolese Army overthrew the regime of President Kasavubu on November 25, 1965, in a bloodless coup and seized power for himself. A month earlier, President Kasavubu dismissed Mr. Moise Tshombe from premiership and appointed Mr. Evariste Kimba in his place. Mr. Kimba's Government failed to get a vote of confidence in the Congolese Parliament on November 14. Declaring himself to be the President of the Republic for the next 5 years, General Mobutu said that he had taken this step to save Congo from the political feud between Mr. Kasavubu and Mr. Tshombe. General Mobutu named one of his right-hand man Col. Leonard Mulamba, Army Chief of Staff as the Prime Minister. The Army leaders in a proclamation said that the Army would not interfere in politics and all political detainees excepting those who supported the anti-Government rebellion, would be set free. Mr. Antione Gizenga, a close associate of the murdered first Prime Minister of Congo, Mr. Patrice Lumumba was freed by the new regime.

CHINA BLASTS SECOND ATOM BOMB

Peoples' Republic of China carried out its second nuclear test on May 14, 1965. The first test by China was made in October, 1964. An announcement from Chinese official sources said that China was developing the nuclear weapons "for the purpose of coping with the nuclear blackmail and threats of the United States". The U.S. Atomic Energy Commission said that the second nuclear device of China was somewhat higher than the first. It was reported that the device was carried aloft by missile and exploded in the air. The testing ground was believed to be the Lop Nor lake area of Sinkiang province. The first test was also carried out in the same place.

CHANGES IN SOVIET HIERARCHY

There were further changes in the Soviet hierarchy last year when Mr. Anastas Mikoyan resigned the presidentship of the Soviet Union in December, 1965 and Mr. Alexander Shelepin, was relieved of his job as Deputy Premier. Mr. Nikolai Podgorny was nominated by Mr. Brezhnev to succeed Mr. Mikoyan as President of the U.S.S.R. Mr. Shelepin will function as number two only next to Mr. Brezhnev in the Communist party. Mr. Mikoyan became President of the U.S.S.R. after the major shake-up in the Kremlin in 1964 when Mr. Khrushchev was ousted from his office.

ESCALATION OF WAR IN VIETNAM

The war in South Vietnam was escalated last year when the United States decided to bomb targets in North Vietnam as a reprisal for Viet Cong attacks on U.S. troops in South Vietnam. American justification of carrying the war into North Vietnam was that the North Vietnamese Government was assisting the guerillas in South Vietnam by supplying men and materials. The bombing raids began in February, 1965 and till the end of the year when this report is being written, these have not stopped. Both the U.S. and North Vietnamese Governments have refused to come to conference table except on their own terms. Moreover, there was a general belief in the U.S. Government circle that more troops should be inducted into South Vietnam to crush the Viet Cong guerillas. By December 1965, more than 2 lakhs American troops had come to join the war in South Vietnam. In spite of heavy and incessant bombing of targets in North Vietnam and of Viet Cong concentrations in South Vietnam by super powerful American planes loaded with latest weapons, there was no sign of surrender on the part of the guerillas. Nor there was any stability in the Saigon Government which was absolutely necessary to give an effective fight to the Viet Cong. The escalation met with increasing opposition from American members of the Senate, a large section of intellectuals and the public who feared that the decision of the U.S. Government to wage a prolonged war in South Vietnam would lead to world conflagration. Moreover, U.S.A.'s main enemy in Asia, Communist China held out the threat that she would fight America in spite of the consequences. China said that U.S.A. was given one lesson during the Korean War. Does she want another lesson in Indo-China? She asked. U Thant, Secretary-General of the UN expressed grave concern at the "dangerous possibilities of escalation because such a situation, if it should once get out of control, would obviously pose the gravest threat to the peace of the world." There was a demand on behalf of 17 non-aligned nations, including India, to reconvene the Geneva Conference in which terms of peace should be discussed with the North Vietnamese Government, the Government of South Vietnam as well as the representatives of the underground Viet Cong. Nothing has come about this. As a result, the war in South Vietnam is intensifying with the risk of its being spread to the whole of Indo-China. The Viet Cong asked for respite in the War during the Christmas in 1965. The U.S. Government initially rejected the proposal by saying that respite can come only after the North Vietnamese Government agree to negotiate permanent peace at the conference table.

They, however, finally agreed to the temporary cease-fire proposal for 36 hours during the Christmas. There was a hint that the U.S. might continue to observe the temporary truce to help open avenues of talks for permanent peace in South Vietnam. The Viet Cong did not agree and

fighting resumed soon after the Christmas was over. The U.S. Government, however, suspended their air raids on North Vietnam in view of diplomatic peace overtures made by several countries including India and the Soviet Union.

COUP IN ALGERIA

By a bloodless coup d'etat, the army in Algeria seized power from President Ahmed Ben Bella on June 19, 1965. Colonel Boumediene, his erstwhile colleague and right-hand man formed a new Government by the decree of the Revolutionary Council. The coup took everybody by surprise because it came just on the eve of the Afro-Asian Summit meet due to be held in Algiers later in the same month, for which President Ben Bella made extensive preparations. After the ousting of Ben Bella the meeting was postponed in spite of Colonel Boumediene's frantic effort to have it held in time.

MALDIVE ACHIEVES INDEPENDENCE

The Maldive Islands, lying 400 miles south-west of Ceylon in the Indian Ocean, become a free nation by an agreement signed between representatives of the British Government and the Government of the Maldives in July, 1965 at Colombo. Britain, however, retained the right to use the air-field on Gan Island accorded to her previously under the Anglo-Maldivian Treaty of 1960. The Maldive Archipelago consists of nearly 2,000 coral islands of which only about 215 are inhabited. *Male* is the capital of the islands. The Maldives had been a British protectorate for more than 80 years. Its population is about 90,000.

SINGAPORE SECEDES FROM MALAYSIA

The Federation of Malaysia received a rude shock when the most prosperous and strategic island state of Singapore broke away from the Federation on August 9, 1965. The decision was bilateral. Explaining the decision, Tunku Abdul Rahman, the Malaysian Prime Minister said that differences between the Federal and Singapore Governments had become such as to continue the union would be impossible except by taking repressive actions against the Singapore Government. Singapore's Prime Minister, Mr. Lee Kuan Yew said that despite ideological differences, Singapore and Malaysia would work in closest co-operation. Under the secession treaty, the two Governments agreed to establish a joint defence council. It also gave the Malaysian Government the right to maintain its military bases already there for defence purposes.

DE GAULLE WINS BUT REBUFFED

76-year old President of the Fifth Republic of France, General Charles De Gaulle was re-elected as the President for another term of 7 years

after a run-off held on December 19, 1965. In the first round election held on December 5, the ambitious General failed to secure the needed 50 p.c. plus one vote. There were altogether 6 runners, the closest rival being Francois Mitterrand, a left-wing candidate, who secured 31% of votes against De Gaulle's 45% at the first count. In the run-off election, De Gaulle won by securing 55% of votes against Mr. Mitterrand's 45%. The rebuff of the French voters angered the aged but agile General who said that France will go to rack and ruins if he is not re-elected.

GEMINI'S HISTORIC RENDEZVOUS IN SPACE

U. S. A. took a big leap towards the moon last year when her Gemini VI and VII rockets made a historic rendezvous in space after a record-breaking orbit for 14 days in the outer space. Gemini VII was manned by Frank Borman and James Lovell who successfully completed the 14-day record orbiting in space and came down to earth dead on time on December 18, 1965. Gemini VI manned by astronauts Walter Schirra and Thomas Stafford, joined in the rendezvous on the 11th day and came down after docking the Gemini VII from a distance of only 10 feet. This consistently high level of performance from the astronauts showed that man could easily remain alert and efficient on trips to the moon. The next steps along the USA's lunar road include testing of the giant Saturn V rocket which is to send a three-man Apollo spacecraft into a parking orbit round the earth and then to the moon. Sir Bernard Lovell, Director of the Jodrell Bank Observatory said, "The supreme precision with which the whole enterprise has accomplished, indicates that the dates for American Apollo programme now have a solid foundation for achievement."

PAKISTAN BREAKS OFF DIPLOMATIC RELATIONS WITH MALAYSIA

Pakistan broke off diplomatic relations with Malaysia on Oct. 6, 1965. Mr. Z. A. Bhutto, Pakistan's foreign minister declared that the decision was made because Malaysia supported India's stand with regard to Kashmir and denounced Pakistan's aggression on India. According to Mr. Bhutto, Malaysia failed "to make distinction between the aggressor and the aggrieved, chose to ignore the principle of self determination and violated the solidarity of the Afro-Asian world."

TURMOIL IN INDONESIA

Indonesia passed through a series of confusion and crisis last year, which almost toppled the regime of powerful President Dr. Sukarno. On September 30, a small force led by Colonel Untung set up a "Revolutionary Council" after claiming to have smashed a counter-

military plot to overthrow President Sukarno. In the bloody uprising that followed, 6 Generals known to be rightists were found murdered. Defence Minister General Nasution, a strong nationalist and enemy of the most powerful Communist party of Indonesia, was wounded in the skirmish with the rebel forces. For a few days Dr. Sukarno's whereabouts were unknown. It seemed that he had almost lost control of the situation. The opposing forces both claimed loyalty to the President. But the "Revolutionary Council" soon lost power and a counter force led by Major-General Suharto recaptured power and the rebellion was smashed after bloody reprisals. General Nasution and his loyal colleagues came back to power. Dr. Sukarno remained untouched but his powers were by all intents and purposes curtailed. The powerful P.K.I. known to be a strong adherent of the Chinese line in international communism, was banned in Djakarta and its outskirts. D. N. Aidit, leader of the PKI evaded arrest and was known to have been organising his party followers in other parts of this thousand-island country. President Sukarno tried his best to make a rapprochement between the nationalist, socialist and communist elements in his country. The Generals in power, though not publicly opposing the President, did in fact embark upon a path which lead to a total civil war in Indonesia. In any case, Indonesia's filibustering against Malaysia and indecent behaviour against India came to a stop for the time being. Because the all-powerful President Sukarno who inspired these ill-conceived campaigns against his neighbours and friends, himself received a rude shock from his own countrymen, from which it would be impossible for the ageing Dictator to recover in near future, if not within his lifetime.

UNITED NATIONS, 1965

Twenty Years of the UN—The United Nations completed its twenty years of existence in 1965. A commemorative function was held in San Francisco in June 1965 to celebrate the twentieth anniversary of the signing of the United Nations' Charter.

On this occasion, Mr. U Thant, Secretary-General recalled the twenty-year balance sheet of the world body. He said, "....the most important thing we can do at this twentieth anniversary of the signing of the Charter of the United Nations is to think back to the tragedies and agonies which made the Charter possible and, in resolving that humanity shall never be so afflicted again, rededicate ourselves to its aims and ideals."

Mr. Alex Quason-Sackey, the then President of the General Assembly said, "We have in our hands a tool for peace and security for progress

and understanding. It would be unfortunate not to realise that we must strive to use these tools to fulfil the ideals of the fathers of the Charter and to fulfil the hopes and dreams of the needy humanity we represent here."

All the member States of the U.N. were represented in the function. And it showed the determination of the nations of the world to work together for peace and prosperity of the world in spite of differences in social systems and political affiliations.

UN Medals for Indian Troops—Indian troops serving with the United Nations' Emergency Force, received medals for their distinguished services with the UN at a ceremonial parade held in April 1965 in Gaza commanded by Lt. Colonel S. P. Malhotra. The UNEF Commander Major-General Syseno Sarmento took the salute. He praised the Indian troops and said, "You have readily absorbed the *esprit de corps* prevailing in this multi-national Force quite in keeping with the tradition of the Indian Army." He pointed out that India had readily made available her troops for the UN service in various places where this world organisation has been engaged in the difficult task of maintaining peace.

Human Rights Commission—The Commission on Human Rights of the UN held its twenty-first session in Geneva in March-April 1965. The Commission adopted some important resolutions mainly on safeguarding the rights of the peoples of the world. It decided to devote 1968 for the cause of Human Rights throughout the world. Programmes would be taken for that international year to encourage the protection of human rights and fundamental freedoms and bring home to all the peoples the breadth and concept of human rights and fundamental freedoms in all their aspects.

Call for Tibet's Freedom—The General Assembly of the UN adopted a resolution in December by 43 to 26 votes with 22 abstentions, deploring "the continued violation of fundamental rights and freedoms" of the people of Tibet. It called upon Peoples' Republic of China to restore human rights and fundamental freedoms to the people of Tibet. The resolution was sponsored by El Salvador, Ireland, Malaysia, Malta, Nicaragua, the Philippines and Thailand. India voted for the resolution. The resolution appealed to all member States to take all measures and use their best endeavours to achieve the purposes of the resolution. The Assembly passed similar resolutions in 1959 and 1961.

Population Commission—At the thirteenth session of the UN Population Commission held in April 1965 it was resolved that in order to meet the present and future needs of the member States, the UN and its specialised agencies should play a wider and more active role in the field of population.

It was proposed that the Commission would give assistance to member States upon request on all aspects of questions relating to the subject of

population, including demographic training, the collection of basic statistics, research etc. At the same time, the Commission stated that they should refrain from espousing any particular population policies or attempting to promote adoption of such policies by Governments. India was one of the members of the 18-member Commission.

Three New Members—Gambia, Singapore and the Maldives Islands became three new members of the UN in 1965. This brought the membership of the UN to 117.

International Co-operation Year—1965 was observed as the International Co-operation Year by the member States of the UN. A few years ago, India's former Prime Minister Jawaharlal Nehru suggested in an address to the UN General Assembly to dedicate one year for co-operation among the nations of the world.

The suggestion was taken up by the UN. During the year, member States exchanged ideas, co-operated with each other in various fields of activities with renewed determination. Inaugurating the Year, Mr. U Thant said, "If humanity is to survive, and to make progress, the peoples of the UN have no other choice but to co-operate."

Resolution of Portuguese Territories—The Security Council of the UN passed a resolution in November 1965, asking all member States to refrain from offering Portugal any assistance "which would enable it to continue its repression of the people of the territories under its administration." It also asked all member States to take necessary measures to prevent the sale and supply of arms and military equipment to Portugal for that purposes.

Security Council Enlarged—As a result of the amendments to the UN Charter, the Security Council has been enlarged. Previously there were 5 permanent members (China, France, United Kingdom, United States and the USSR) and 6 non-permanent members in the Council. Under the amended constitution there will be 10 non-permanent members in the Council.

Nobel Peace for UN Agency—The Nobel Peace Prize for 1965 was awarded to The United Nations' Children's Emergency Fund (UNICEF). This award was given to the UNICEF in recognition of the work it is doing for needy children throughout the world. Dane Kaye, the famous American movie actor and a promoter of the UNICEF will receive the prize on behalf of the UN agency.

U. N. Budget for 1966—Secretary-General, U. Thant submitted gross budget estimates amounting to \$116,737,110 for the UN in 1966. This is an increase of \$8,361,405 over the level recommended for 1965 by the General Assembly's Advisory Committee on Administrative and Budgetary Questions. U Thant said that despite the precarious cash position resulting mainly from peace-keeping operations, there was a pressing need to meet new demands of the member States for expanded programmes, particularly in the economic and social fields.

WHO'S WHO

Abdulla, Sheikh Mohammad, —b. Dec. 1905 near Srinagar; graduated from Lahore University and took M.Sc. degree from Aligarh University, 1930; school master under Kashmir Government; came in the public life in 1930; first started Muslim Conference with communal outlook but turned it into National Conference, 1938; jailed several times, notably in 1946 for '*quit Kashmir*' agitation and released in 1947; President, All-India States Peoples' Conference; head of the Emergency Administration of Kashmir during Pakistani tribal attack till 1952; Prime Minister, Kashmir, 1948-53; was under detention from 1953 but released on January 8, 1958 and again put to jail on April 30, 1958 but released in 1964; now under detention since 1965.

Ahmed, Muzaffar—b. 1889; Member, Communist Party of India since its beginning; was State prisoner in 1923; convicted in Meerut Communist conspiracy case 1929-33; edited several Bengali dailies and weeklies, such as *Navayug* and *Ganabani*; author of several books in Bengali and English; was Member, Central Committee of the Communist Party of India.

Aiyer Sir C. P. Ramaswami, —b. Nov. 12, 1879; joined Madras Bar in 1903; Member, R.T.C.;

Indian delegate to the League of Nations, 1926-27; Law Member, Government of India, 1931 and 1942; Member, Council of State, 1930; Vice-Chancellor, Travancore University, 1937; Dewan of Travancore, 1936-47; Member, Press Commission, 1953; Vice-Chancellor, Banaras Hindu University, 1954-56; now Vice-Chancellor, Annamalai University from 1963.

Ali Yavar Jung Bahadur, Nawab—b. 1905; educated at the Nizam's College, Hyderabad and Queen's College, Oxford; was Professor of History, Osmania University, Hyderabad, 1937-44; Secretary of certain departments, Government of Hyderabad, 1936-44; Minister of Hyderabad Government, 1946-47; Vice-Chancellor, Osmania University, 1948-52; Ambassador of India to Egypt and concurrently Minister to Lebanon and Libya, 1954-58; Indian delegate to the General Assembly of the U. N., 1946-50; Member, Indian National Commission for UNESCO, 1950; was Ambassador to Yugoslavia; was Ambassador to France.

Alva, Joachim,—b. Jan. 21, 1907; educated at Mangalore and Elphinstone College, Bombay; suffered imprisonment twice for Congress cause; Advocate, Bombay High Court; founder and Editor, *Forum* (1943); Member, All-India Newspaper Editors' Conference;

Sheriff of Bombay, 1949; Member, Lok Sabha since 1952; a noted journalist.

Alva, Mrs. Violet—b. Apr. 24, 1908 at Ahmedabad; educated at Bombay; studied law and practised as an advocate; was Honorary Presidency Magistrate, Bombay, 1947 and Justice of the Peace; Vice-President, All-India Christian Congress, 1946; founder and Editor, *Begum* and later *Indian Woman* Member, Indian Press Delegation to Egypt, 1950; first woman to be elected to the Standing Committee of the All-India Newspaper Editors' Conference, 1952; Member, Bombay Legislative Council, 1947-52; was Dy. Minister for Home Affairs, Govt. of India; now Vice-Chairman, Rajya Sabha.

Anthony, Frank Reginald, —b. Sept. 25, 1908; educated at Robertson College, Jabalpur, Law College, Nagpur and Inner Temple, London; President, All India Anglo-Indian Association; President, National Union of Railwaymen; Member, Central Assembly, 1942-45; Member, Sapru Conciliation Committee, 1945; Member, National Defence Council, 1942-45; Member, Central Pay Commission, 1945; delegate, General Assembly of U. N., 1946 and Commonwealth Parliamentary Conference, 1948; Member, Lok Sabha.

Aney, Madhavrao Srihari, —b. Aug. 29, 1880; educated at Morris College, Nagpur; joined Congress in 1908; thrice Member, Legislative Council, C. P. and Berar; joined C.D. Movement, 1930 and suffered imprisonment; Member,

Congress Working Committee, 1924-25 and 1931-34; President, Berar P. C. C. 1920-30; was a prominent member of the Congress Nationalist Party and Hindu Mahasabha; acting President of the Congress, 1933; started All-India Hindu League; Member, Viceroy's Executive Council, 1941-43; India's Representative in Ceylon 1943-47; Member, Constituent Assembly of India, 1947-48; Governor of Bihar, 1948-52; Member of the Lok Sabha.

Anand, Dr. Mulk Raj—b. Dec. 12, 1905 in Peshawar; educated at the Punjab, London and Cambridge Universities; lecturer in literature and philosophy to the London County Council; editor of various magazines; author, novelist and critic; won research scholarship and studied philosophy in London and Cambridge; was a broadcaster at the B.B.C.; was film-script writer at the British Ministry of Information; famous for his novels, 'Coolie', 'Untouchable' and 'Two Leaves and a Bud' describing the life of Indian masses; now Editor of *Marg*, famous art journal.

Aruna Asaf Ali—b. 1910; former Mayor of Delhi; was a prominent leader of the All-India Peace Council, Afro-Asian Solidarity Movement and the National Federation of Indian Women; received International Lenin Peace Prize for 1964.

Ayyangar, M. Ananthasayanam—b. Feb. 4, 1891; educated at Pachaiyappa's College and Law College, Madras; Member, Municipal Council, Chittoor; Member, Fiscal Commission, Constituent

Assembly of India, A.I.C.C. and Central Advisory Board of Education; Deputy Speaker, Lok Sabha; was President of Harijan Sevak Sangh; went to Ottawa as Indian Delegate, Commonwealth Parliamentary Conference; was leader of Parliamentary Delegation to China, 1956; was elected Chairman, Commonwealth Parliamentary Association, 1937; Speaker, Lok Sabha, 1958-62; Governor of Bihar from 1962.

Banerjee, Tarasankar—b. 1898 in Labpur, Birbhum district; after finishing school, came to Calcutta and gave up his studies to join freedom struggle; after serving political sentence, devoted entire time to writing; wrote first-rate plays and novels and established himself as a well-known figure in literature; was awarded Sarat memorial prize and medal of Calcutta University, 1947 and Tagore Memorial Prize of West Bengal Government, 1955; received Sahitya Akademi's Prize in 1956; was a nominated member of Rajya Sabha.

Barua, Dr. Birinchi Kumar,—b. Nov. 20, 1910; educated at Calcutta, London, Oxford and Upsala (Sweden); Member, Official Language Commission, 1955-57; Professor and Dean of the Faculty of Arts, Gauhati University; Member, Sahitya Akademi; writer of Assamese and English books; received Sahitya Akademi's Prize.

Bakshi, Ghulam Mohammad—b. July, 1907; began his life as a village teacher; joined Kashmir National Conference in his early days and had to go underground

several times; arrested and imprisoned four times for his political activities; was Deputy Prime Minister and the Minister of Police, Communication and Supply, Jammu and Kashmir; was Prime Minister, Jammu & Kashmir 1953—63.

Basu, Jyoti,—b. July 8, 1914; educated at Calcutta University; Bar-at-Law, Calcutta High Court; Member, Communist Party since 1940; Member and Leader of the Opposition, West Bengal Assembly.

Bhaktavatsalam, M.—b. 1897; joined Madras Bar in 1923; left practice in 1927 to devote his time to politics; elected to the M.P.C.C. in 1923; became its Vice-President in 1927; elected to Madras Assembly in 1927; became Minister for P.W.D. in April, 1946; was Finance Minister in the Kamraj Ministry; now Chief Minister of Madras from 1963.

Birla, Ghanshyamdas—b. 1894 in Jaipur State; Managing Director of Birla Bros. Ltd., which manage jute, cotton, sugar, paper and woollen mills, collieries, banks and insurance companies, national and provincial daily and weekly newspapers, tea gardens, factories which manufacture motor cars, bicycles, textile machinery, rayon, paper, plastics, radios, small tools, ball bearings, boilers, linoleum, carpets, heavy chemicals and non-ferrous metals, zamindari, etc., all over India; was Member of the Indian Legislative Assembly; resigned in 1930 in protest against Imperial Preference; President, Indian Chamber of Commerce, Calcutta, 1924, Federation of Indian Cham-

ber of Commerce, 1929; Member, Indian Fiscal Commission on Labour, 1930; was a Member of the Bengal Legislative Council; delegate to the I.L.O. at Geneva, 1927; Member, 2nd R.T.C.; awarded *Padma Bibhusan*, 1957; Chairman, All-India Harijan Sevak Sangh; author of several books in Hindi and English.

Bhave, Acharya Binoba—b. Sept. 11, 1895 in Kolaba district of Maharashtra; educated at Baroda College, Baroda; gave up studies and left home and went to Banaras to study Sanskrit; met Gandhi at Banaras and joined his Sabarmati Ashram; was named by Mahatma Gandhi as his first representative in the C. D. Movement; was Director of the Mahila Ashram, Wardha for a long time; imprisoned for Congress movement; originator of *Bhoo-dan* Movement; has written many religious books.

Brahm Prakash—b. in East Africa after the end of World War I; has been associated with the Congress since 1936; imprisoned for the individual disobedience movement; leader of the Delhi Congress Committee, 1946; Chief Minister, Delhi State, 1952-55; now Member of the Lok Sabha.

Bose, Nandalal—b. Dec. 3, 1883; passed entrance examination and joined Calcutta Government School of Arts in 1905; came under the influence of Dr. Abanindranath Tagore; served apprenticeship under him for several years; joined Santiniketan School of Tagore in 1914; was Director of Kala-bhavan, Santiniketan, 1919-52;

travelled Far East, China, Japan with poet Tagore in 1914; decorated Congress pandals and exhibitions many times; was conferred Doctorate by Banaras Hindu University, 1950; the title of *Desikottama* by Visva-Bharati, 1952, D.Litt. by Calcutta University, 1957 and by Visva-Bharati, 1963.

Bose, Satyendranath—b. Jan. 1, 1894; educated at Presidency College, Calcutta; graduated in 1913; got M.Sc. degree in 1913; Professor of Physics, Calcutta University; reader of Physics, Dacca University and later Head of the Department for several years; Khaira Professor of Physics, Calcutta University for several years; President, Indian Science Congress, 1944; Chairman, National Institute of Science, India, 1948-50; Member, Rajya Sabha for some years; originator of the subject of quantum statistics, the utility of which was recognised and extended by Einstein. A group of nuclear particles has been given the name 'Boson' in recognition of his contribution to the subject; also made significant contributions to Einstein's general theory of relativity; Vice-Chancellor, Visva-Bharati, 1956-58; *Fellow of the Royal Society*, 1958; awarded *Padma Vibhusan*, 1954; now National Professor of India.

Cariappa, General K. M.—b. Jan. 28, 1900 in Coorg; educated in Central High School, Mercara and Presidency College, Madras; one of the first batch of Indian cadets commissioned from Daly College, Indore, 1919; was with 1/17th Rajputs in Waziristan, 1922-

25; first Indian officer to enter the Staff College, Quetta, 1933; Quartermaster-General, Deccan district, 1938; served with the 10th Indian Division in Iraq, Syria and Iran, 1941; became Lt.-Colonel in 1942 and commanded a machine-gun battalion of the 7th Rajputs, thus becoming the first Indian to command a battalion; Assistant Adjutant and Quartermaster-General, Army, 1943; Member, Army Reorganisation Committee, 1944; visited England in 1946 as one of the first two Indian students at the Imperial Defence College; Major-General, 1947; Chief of General Staff, 1947; appointed G.O.C.-in-Chief, Eastern Command, 1947; Lt.-General, 1947; G.O.C.-in-Chief, D.E.P. Command, 1948; decorated with the Legion of Merit by U.S. Government, 1949; Commander-in-Chief, Indian Army, 1949-53; Indian High Commissioner to Australia and New Zealand, 1954-56.

Chandrasekhar, Dr. Subrahmanyan—b. Oct. 19, 1910 at Lahore; took M.A. from Presidency College, Madras, 1930; attended Trinity College, Cambridge, and then as a research fellow; became Ph.D. in 1939 and then D.Sc. in 1942; became a Research Associate in the Yerkes Observatory, University of Chicago, in 1937; served as Assistant Professor and Associate Professor in the same Observatory; became a Professor in 1944, a Distinguished Service Professor in 1947 and later became the Morton D. Hull Distinguished Service Professor in 1952; became F.R.S. in 1945.

Chamanlal, Dewan—b. Oct. 30,

1892 in Behra district, Shahpur (Pakistan) and educated in London and Oxford; was Asstt. Editor of *Bombay Chronicle*; Member, Central Legislative Assembly, 1923-31 and 1945-46; Member, Punjab Legislative Assembly, 1936-49; Member, Constituent Assembly, 1946-48; represented India in I.L.O. Conference at Geneva, 1932 and Montreal, 1946; founder of I.T. U.C. in 1920; Member, Royal Commission on Labour, 1929-31; Ambassador in Turkey, 1948-49; suffered imprisonment for taking part in political movements; Member, Parliamentary Delegation to U.S.S.R. 1955; Member, Rajya Sabha; leader of the Indian Food Delegation to Argentina; Member, Lok Sabha.

Chagla, Mohammedali Currim,

—b. Sept. 30, 1900; educated at St. Xavier's College, Bombay and Oxford; called to Bar (Inner Temple), 1922; Professor, Government Law College, Bombay, 1927-30; Secretary, Bar Council, Bombay High Court, 1933-1941; Vice-Chancellor, Bombay University, 1947; Judge, Bombay High Court, 1941-47; Chairman, Legal Education Committee, 1948; Member, Law Commission; Chief Justice, Bombay High Court 1947-58; Judge, International Court of Justice at the Hague, 1957-60; Chairman, Life Insurance Enquiry Committee, 1958; Indian Ambassador to U.S.A., 1958-61; Indian High Commissioner to Great Britain, 1962-63; Leader of the Indian Delegation to U.N. for several times; now Minister of Education

from 1963; presented India's case at U.N. against Pakistan in 1965.

Chakravarti, Phanibhusan—
b. Oct. 15, 1898 at Narayanganj, Dacca (E. Pakistan); 1st class in B.L. Exam.; lecturer, Jagannath College, Dacca; joined Calcutta Bar, 1927; was connected with *Calcutta Weekly Notes* for 18 years; conducted Bhowal Sanyasi Case; Legal Adviser, Government of India for Income-Tax matters, 1940-45; Judge, Calcutta High Court; Member, Income-tax Investigation Commission, 1949-51; Chief Justice, Calcutta High Court, 1952-59.

Chakravarti, Sm. Renu—
b. Oct. 21, 1917; educated at Calcutta and Newham College, Cambridge; member, Executive Committee; All-India Women's Conference; ex-lecturer, Calcutta University; remained underground for three years to avoid arrest; member of the Communist Party of India; Member, Lok Sabha.

Chaliha, Bimala Prasad—
b. Mar. 26, 1912; participated in national movement, and was imprisoned in 1932 and 1942; invented an automatic spinning wheel and joined khadi and village uplift work under Mahatma Gandhi; was an M.L.A., Assam, 1946; became Parliamentary Secretary, 1947; became President, Assam Congress Committee, 1952; Member, Lok Sabha, 1953; Chief Minister of Assam since 1957.

Chaudhuri, Sachindra—
b. Feb. 24, 1903; was educated at Rani Bhabani School, Calcutta and graduated from Presidency College, Calcutta; he did his post-graduate

studies in Fitzwilliam Hall, Cambridge, and was called to the Bar from Lincoln's Inn, London; was a senior advocate of the Supreme Court and director of several companies; was a member of the Central Board of the State Bank of India, and President of its local Board; was Advocate-member of the Law Commission; a trustee of the Victoria Memorial, Calcutta and of the Fine Arts Academy, Calcutta, and member of the Executive Committee, Chittaranjan T.B. Association, Darjeeling; was twice member of the Indian delegation to the U.N. General Assembly; took over as Union Finance Minister from January 1, 1966.

Chaudhuri, Tridib—
b. 1911 at Dacca; educated at Berhampore (W. Bengal); passed B.A. and M.A. during jail confinement; was imprisoned 1931-37 and again 1940-46; was a Congress member upto 1940; remained member, Congress Socialist Party upto 1947; after release in 1947, became a member of the R.S.P.; became Member of the Parliament on R.S.P. ticket; joined in Goa liberation movement and jailed by the Portuguese Govt. 1955-57; Member, Lok Sabha.

Chaudhuri, Naba Krushna—
b. 1901; educated at the Ravenshaw College, Cuttack; joined Non-Co-operation Movement in 1921; joined Mahatma Gandhi's Sabarmati Ashram in 1923-24; established Congress Socialist Party in Orissa, 1934; prominent leader in Orissa of States People's movement; was in prison during 1942 movement; was Secretary, Orissa P.C.C.; Member, Congress Working Com-

mittee; was Chief Minister of Orissa, 1952-56.

Chaturvedi, Benarasi Das—

b. Dec. 24, 1892 at Firozabad, U.P.; educated at Agra; a journalist and a writer in Hindi since 1912; Professor of Hindi, Gujarat National College, 1921-25; Editor of *Vishal Bharat* for 10 years and *Madhukar* for 6 years; Member, Rajya Sabha from 1958-64.

Chaudhuri, General J. N.—

June 10, 1908; educated at Calcutta, London and Royal Military College, Sandhurst; received commission, 1928; awarded O.E.E. and was mentioned three times in Despatches during World War II when he served Sudan, Eritrea, Abyssinia and the Western Desert in the Middle East; appointed in the Middle East, was Asst. Adjutant and Quarter-Master General of his Division; on return to India he was posted as Senior Instructor at the Staff College, Quetta; Commander, 16th Light Cavalry in Aug. 1944; became Brigadier-in-charge, Administration, Malaya Command, 1946; attended Imperial Defence College, London, 1947; Chief of the General Staff; Military Governor, Hyderabad State 1948-49; Officer commanding, 1st Armoured Division, Indian Army, 1952; Adjutant-General, 1952-53; Chief of the General Staff, Indian Army, 1955-56; Chief of Staff, Western Command and Southern Command; Chief of the Army Staff since November 20, 1962; was awarded *Padma Bibhusan* in Nov. 1965.

Chatterjee, Vice-Idmiral A.

K.—b. 1914; joined the Royal

Indian Navy as a cadet in 1933; qualified as an anti-submarine specialist in the U.K. in 1940; completed his Staff course there in August, 1947; on return to India the same year, he was appointed Director of Naval Plans at Naval Headquarters; in June 1950, he assumed the command of the Flag Ship *INS Delhi* and was promoted to the rank of Captain; from December 1950 to January 1953, he was the Naval Adviser to the Indian High Commissioner in the U.K.; on his return to India, he once again commanded the Flag Ship *INS Delhi* for some time and then became the Commodore-in-Charge, Bombay in November; took over as Deputy Chief of the Naval Staff in February, 1958 and was promoted to Rear-Admiral when the appointment was upgraded in February, 1959; took over as Commandant of the National Defence College in January 1964; became Chief of the Naval Staff in March, 1966.

Chatterjee, N. C.—b. Oct. 19,

1895; educated in Calcutta and London where he took LL.B. degree and joined Calcutta Bar; joined Hindu Mahasabha movement in 1937; abstained from politics for four years; Councillor, Calcutta Corporation, 1940-44; Judge, Calcutta High Court, 1948-49; joined Hindu Mahasabha movement again and became its President; Member, Lok Sabha, 1951-56; Advocate, Supreme Court of India; Member, Lok Sabha, from 1963.

Chatterjee, Suniti Kumar—

—b. Nov. 26, 1890; educated at

Presidency College, Calcutta and School of Oriental Studies, London; Khaira Prof. of Indian linguistics and phonetics, Calcutta University, 1922-52; travelled with Tagore in the Far East, 1927; represented Calcutta University in different international conferences in 1935, 1938, 1948, 1949 & 1950; Chairman, W. Bengal Legislative Council, 1952-64; Member, Language Commission; Chairman, Sanskrit Commission, 1956; author of several books on linguistics; *Padma Bhushan*, 1955; *Padma Vibhushan*, 1963; National Professor of India (*Humanities*), from 1965.

Chattopadhyaya, Harindranath
—b. Apr. 2, 1898 at Hyderabad; brother of Sarojini Naidu; educated at Hyderabad, Deccan and also at Cambridge for a year; well-known as a poet and playwright; has travelled extensively throughout Europe and America; has acquired specialised knowledge in theatre and stage-craft; is a disciple of Sri Aurobindo; visited Russia as a representative of Indian artists and authors, 1951; Member, Lok Sabha 1951-56; author of *Feast of Youth*, *Perfume of Earth*, *Gray Clouds*, etc.

Chavan, Yeshwantrao, B.
b. Mar. 12, 1914 in Satara district, now in Maharashtra; participated in the Civil Disobedience Movement of 1932; graduated in 1938 and took LL.B. degree in 1941; joined the 'Quit India' Movement and led underground movement from 1942-43; Member, Maharashtra P. C. C. since 1940; Member, Bombay Legislative Assembly from 1946;

Minister for Civil Supplies of Bombay, 1952-57; Chief Minister, Bombay, (later Maharashtra), 1957-62; Minister of Defence, Govt. of India from 1962.

Chopra, Lt. Col. Sir R. N.
—b. Aug. 17, 1882; educated at Punjab and Cambridge Universities and then London; joined I.M.S. in 1908; Director, School of Tropical Medicine, Cal., 1935-41; has attained international fame by his researches into tropical diseases; President, Indian Drugs Enquiry Committee, 1930-31; Director, Medical Services, Kashmir State; started Bio-Assay Laboratory in Calcutta for laying down standards in medicines; Hon. Physician, King of Great Britain, 1935-39; President, Indian Science Congress, 1947; Chairman, Indigenous Systems of Medicine Committee; now Director of Drug Research Laboratory, Kashmir.

Cherian, Dr. P. V.—b. July 9, 1893; educated at the Maharaja's College High School, Trivandrum; graduated in Medicine from Madras Medical College; granted temporary Commission of the Indian Medical Service during World War I; on return from War, was appointed, in 1927, surgeon in the Government General Hospital, Madras; became Principal of the Medical College, Madras in 1945; 2 years later, became Surgeon-General of the Government of India; elected to the Madras Legislative Council; elected Chairman of the Legislative Council, 1952; Governor of Maharashtra from 1964.

Dange, S. A.—b. Oct. 10, 1899;

Chairman, Central Executive and member, Secretariat of the Communist Party of India (Rightist); Vice-President, World Federation of Trade Unions; imprisoned numerous times for his activity in conducting strikes; was Member, Lok Sabha.

Das, Sudhi Ranjan—b. Oct. 1, 1894; educated at Santiniketan, 1905-11, Bangabasi College, Calcutta & University College, London, from where he took LL.B. degree in 1918; called to the Bar at Grey's Inn and joined Calcutta Bar in 1919; sometime lecturer, University Law College, Calcutta; Judge, Calcutta High Court for 7 years; Chief Justice, East Punjab High Court, 1949; Judge, Supreme Court of India, 1956-59; Vice-Chancellor, Visva-Bharati University, 1959-65; Member, University Grants Commission; one-man member of Kairon Commission.

Desai, Hitendra K.—b. Aug. 9, 1915; educated in Surat and Bombay; left school studies for a year and participated in the Civil Disobedience Movement in 1930; graduated from the Bombay University in 1937 with Hons.; fellow of the University for a year; after passing his LL.B. in 1939, he started practising Law; during the Individual Satyagraha in 1941, he courted arrest; again detained for a year during 'Quit India' Movement of 1942; was elected member of the Surat Municipality in 1946 and ultimately became its Vice-President; was elected to the erstwhile Bombay State Legislative Assembly in 1957, and in the same

year he joined the Ministry with the Education portfolio; on the formation of Gujarat State in 1960 he continued in subsequent Ministries and in the last Balwantrai Ministry, he was the Home Minister; became Chief Minister of Gujarat in September, 1965.

Dhebar, U. N.—b. Sept. 21, 1905 in Jamnagar State; matriculated at the age of 17; started practice as lawyer at Rajkot, 1929; left practice for good in 1936; joined political movement; courted arrest several times; Chief Minister, Saurashtra State, 1948-54; Congress President, 1954-58.

Devi, Kamala—b. 1903 at Mangalore; educated in Madras and at London School of Economics; General Secretary, All-India Women's Conference, 1926-30; President, All-India Women's Conference, 1944-45; married Harindranath Chattopadhyaya, the poet and brother of Mrs. Sarojini Naidu; a gifted speaker; imprisoned 4 times; first woman to contest Legislative Council election in India, 1926; Member, Congress Working Committee, 1946-47; awarded *Padma Bhushan*, 1955; now Vice-President of the Sangeet Natak Akademi; author of *In War-torn China, Japan: Its weakness and strength* etc.

Desai, Morarji R.—b. Feb. 29, 1896; educated at Wilson College, Bombay; joined Bombay Provincial Service in 1918 but resigned during Non-Co-operation Movement in 1930; suffered imprisonment in 1930, 1932, 1940 and 1942; Member, Bombay Legislative Assembly, 1937-

39; was kept in detention during 'Quit India' Movement, 1942-45; Member, A.I.C.C.; Secy., Gujarat Congress Committee 1931-37; Home Minister, 1946-52, Chief Minister, Bombay, 1952-56; Minister for Commerce and Industry, Govt. of India, 1956-57; Finance Minister, Govt. of India, 1958-63.

Deshmukh, Chintaman D.—

b. Jan. 14, 1896; educated at Bombay and Cambridge; entered I.C.S. in 1919 and received his early administrative training in Madhya Pradesh; one of the Secretaries of Round Table Conference, 1931; Revenue and Finance Secy., Madhya Pradesh for 5 years; Jt. Secy., Ministry of Education, Health and Lands, Govt. of India, 1939; Secy., Reserve Bank of India, 1939-41; Governor, Reserve Bank of India, 1943-49; Governor for India of International Monetary Fund and International Bank for Reconstruction & Development, 1946-49; Chairman, International Monetary Fund and International Bank, 1950; Finance Minister, Govt. of India, 1950-56; Member, Planning Commission, 1950; Chairman, University Grants Commission, 1956-61; Vice-Chancellor, Delhi University from 1962.

Diwakar, R. R.—b. Sept., 30, 1894; educated in Belgaum and Hubli; graduated from Fergusson College, Poona, 1916; graduated in law, 1918; joined Non Co-operation Movement in 1921 and sentenced for 2 years; Editor of *Nava Sakti* in 1923; President, Karnatak Provincial Congress Committee, 1930-34; Editor of *Samjuktā Karna-*

taḥ; imprisoned several times during 1921-45; Member, Constituent Assembly, 1946; delegate, 37th Session of the Inter-Parliamentary Union Conference, Rome, 1948; Minister, Information and Broadcasting, Govt. of India, 1948-52; Governor of Bihar, 1952-56; Chairman, Indian Press Commission.

Dey, Surendra Kumar—b. 1906;

in Sylhet (E. Pakistān); educated at Sibpur Engineering College, Howrah (W. Bengal) and took Master's degree in electrical engineering from Michigan University, U.S.A., 1929-31; worked in the General Electric Co.; left service in 1947 to devote to the rehabilitation of displaced persons; showed wonderful rehabilitation work at Kurukshetra (Punjab) and established the township of Nilokheri; Administrator, Community Project Administration, 1952-56; Minister of State for Community Development & Co-operation, Govt. of India from 1956-65; now Minister in the Ministry of Mines and Metals.

Dutt, R. Palme—b. 1896, edu-

cated at Balliol College, Oxford; Secretary, International Research Department, 1919-22; Executive Member of the same, 1921-26; Editor of *Labour Monthly* since 1921; one of the greatest living authorities on Marxism; author of *Labour International Handbook*, *Modern India*, *World Politics*; Vice-Chairman, Communist Party, England; visited India in 1946.

Dwivedi, Hajari Prasad—b.

Aug. 1897; Professor of Santiniketan (W. Bengal), 1930-50; Head of the Department of Hindi Bhavan,

Visva-Bharati, 1945-50; President, All-India Hindi Sahitya Sammelan, 1946; now Head of the Department of Hindi, Banaras Hindu University from 1950; conferred D.Litt. (Hon.) by Lucknow Univ., 1949; Member, Sahitya Akademi.

Gandhi Indira—b. Nov. 19, 1917; first educated at Switzerland and later at Santiniketan; thereafter went to Somerville College, Oxford; has widely travelled Asia, Europe, America and Russia; acted as a Secretary to her father Late Jawaharlal Nehru; married Feroze Gandhi; at 21 became a member of the Congress and was imprisoned for 13 months; Member, Congress Working Committee; Chairwoman, Women's Department of the Congress; Member, Central Election Board and of Youth Advisory Board of the A.I.C.C.; President of the Congress, 1959; Minister of Information and Broadcasting 1964-65; Prime Minister of India from Jan. 24, 1966.

Gajendragadkar, P. B.—b. Mar. 16, ; had a brilliant academic career; passed M.A. in 1st class and joined Bombay High Court in 1926; edited *Hindu Law Quarterly*; was called to the Bench of Bombay High Court in 1945; was appointed a Judge of the Supreme Court in Jan., 1957; gave famous Bank awards in July, 1955; Chief Justice of the Supreme Court from 1963.

Ghandhy, Sir Jehangir Jivaji—b. Nov. 18, 1896; educated at Bombay University, Columbia University, U.S.A. and Carnegie Technical Institute, U.S.A.; joined Tata Iron and Steel Co., Ltd. as

metallurgical engineer, 1921; Asstt. General Superintendent, 1925; General Superintendent, 1930; General Manager, 1938; Agent, Tata Sons, 1944; Director, TELCO, 1945; Director, Tata Iron & Steel Co., Ltd. since 1954.

Ghose, Dr. Prafulla Chandra—b. Dec. 24, 1891; hails from Malkanda, Dacca; passed B.A. (Hons.) in 1st class in Chemistry in 1913 and M.A. in 1916; first Indian Deputy Assay Master, Calcutta Mint, 1920; gave up the service for Non Co-operation Movement, 1921; jailed a number of times in 1920, 1930, 1932, 1933 & 1934; Member, Congress Working Committee, 1939-50; again imprisoned in 1940 & 1942; is one of the founders of *Abhay Ashram*; Chief Minister, W. Bengal, 1947-48; left Congress and founded Krishak Mazdur Party, which later merged with Krishak Majdoor Praja Party and Socialist Party as Praja Socialist Party; author of few English and Bengali books.

Ghose, Atulya—b. Aug. 28, 1904 in Hooghly district of W. Bengal; joined Non Co-operation Movement in 1921; Member, B.P.C.C., 1924; Secy., W.B.P.C.C., 1948; President, W.B.P.C.C., 1950; Member, Working Committee of the Congress, 1950-51; served imprisonment for many times during independence movement; now a M.P. from 1952 and a member of the Congress Working Committee.

Ghosh, Tushar Kanti—b. Oct. 4, 1899; graduated from Vidyasagar College; started newspaper career in 1920; founded *Jugantar*

& *Allahabad Patrika*; President, All-India Newspaper Editors' Conference, 1946-47; President, Indian and Eastern Newspaper Society, 1948-49; represented India at the Empire Press Union Conference, London, 1946; Director, Press Trust of India; Member, Central Board of Censors, 1951-53; Member, International Press Institute and Chairman, Press Union; was President, A.B.C.; Editor of *Amrita Bazar Patrika* since 1928; Managing Director, *Jugantar* and *Amrita Bazar Patrika*; Editor of *Amrita* (Bengali weekly).

Giri, V. V.—b. Aug., 10, 1894; educated at Berhampur (Ganjam) and Dublin (Ireland); practised law for some time; joined Non-Co-operation Movement in 1921; President, All-India Railwaymen's Federation, 1927 and its Joint Secy., 1929-36; twice President, A.I.T.U.C.; represented A.I.T.U.C. at International Labour Organization at Geneva, 1927; represented labour in 2nd Round Table Conference, 1930-31; Member, Madras Legislative Assembly, 1937; Minister of Labour and Industries, Madras, 1937-39; again a Minister of Madras in 1946 which he resigned; India's High Commissioner to Ceylon, 1947-50; Labour Minister, Govt. of India, 1952-54; Governor of U.P., 1958-62; Governor of Kerala, 1962-65; now Governor of Mysore from 1965.

Gopalan, Avilliath Kutteri—b. Feb. 20, 1904 in Malabar; passed Matric exam. from Mission High School, Tellicherry; clerk in Malabar District Board for 9 years;

joined Gandhi movement in 1927 and was imprisoned in 1930; joined Congress Socialist Party, 1935; Member, A.I.C.C., 1937-43; President and Secretary, All-India Kishan Sabha, 1951; headed a hunger march from Calicut to Madras (700 miles) in 1938; joined Communist Party in 1939, was again imprisoned in 1941 but disappeared from Vellore Central Jail; emerged from his hide-out in 1946 but captured and kept in jail till May 1951; Secretary, Kerala Communist Party since 1946; Member, Central Committee, Communist Party of India; now Member, Lok Sabha and Leader of the Party in the House.

Govind Das, Seth—b. 1896; joined Non Co-operation Movement in 1920; suffered imprisonment for 7 years; President, Mahakoshal P.C.C., 1928-34 and 1946 onwards; Member, Central Assembly, 1923-25, 1934 & 1947; visited South and East Africa in 1937 in connection with the status of Indians; President, Hindi Sahitya Sammelan, 1948; Leader, Indian Delegation to Parliamentary Conference, New Zealand, 1950; has written a good number of dramas, novels and travellogues; now Member, Lok Sabha since 1950; awarded *Padma Bhushan*, 1961.

Gupta, Bhupesh—b. Oct., 1914; educated at Calcutta and London; was imprisoned for several years for political activities; Member, Central Executive and Secretariat, C.P.I. (Rightist); Member, and Leader of the Party, Rajya Sabha.

Hanumanthaiya, K.—b. in 1908; educated at Mysore and Poona;

was President of the Bangalore Municipal Council, 1942; Leader, Congress Party in the Mysore Representative Assembly, 1945-49; President, Bangalore District Congress Committee; Indian Representative at the Inter-Parliamentary Union Conference, Stockholm, 1949 and Dublin, 1950; was Chief Minister of Mysore.

Hussain, Dr. Zakir—b. Feb., 1897; educated at Aligarh University; received D.Litt from Berlin Univ., gave concrete shape to Mahatma Gandhi's Wardha scheme of basic education; built up *Jamia Millia* into one of the most significant educational institutions of the country and was its Vice-Chancellor from 1926-53; Chairman, Central Board of Secondary Education; Vice-Chancellor, Aligarh Muslim University, 1948-56; Member, Press Commission; Governor of Bihar 1957-62; Vice-President of India from 1962; *Padma Bihusan* 1954; *Bharat Ratna*, 1963.

Jatti, B. D.—b. Sept. 10, 1912; took LL.B. degree from Kolhapur in 1940; pleader at Jamkhadi for 5 years; served as a Minister and Chief Minister of Jamkhadi State; nominated Member, Bombay Legislative Council, 1948; was Parliamentary Secy. to the Chief Minister of Bombay, Mr. B. G. Kher for 2 years; was Deputy Minister for Health and Labour, Bombay; after reorganisation, was elected to the Mysore Legislative Assembly; Chief Minister of Mysore 1958-62; now Finance Minister of Mysore from 1962.

Jay Prakash Narayan—b. Oct.,

11, 1902, in Saran district, Bihar; left for America in 1922 and stayed there for nearly 8 years and studied at five different universities; returned to India in 1929, and was placed in charge of Labour Research Department of the Congress; General Secretary, Congress, 1930-32; imprisoned for C. D. Movement; formed Congress Socialist Party in 1934; imprisoned in 1939 under D. I. Act but escaped from jail and emerged in 1946, Member, Congress Working Committee, 1936 and 1946-47; left Congress in 1947 and started Praja Socialist Party in 1952; President, Railway Labour Federation, 1947-50; has joined Bhoodan and Sarvodaya Movement; Winner of the Ramon Magsaysay award for public service 1965; has been working for peace in Nagaland.

Jain, Ajit Prasad—b. Oct. 2, 1902; educated at Lucknow University; Member, U.P. Legislative Assembly, 1937-38; Member, A. I. C. C., 1931-35 and 1946; Member, Constituent Assembly, 1934-48; Member, Indian Parliament since 1948; imprisoned for participating in Congress movement, 1921, 1930-32, 1940 and 1942; has travelled extensively in Europe; Minister of Rehabilitation, 1950-54; Minister of Food and Agriculture, India, 1957-62; Governor of Kerala 1965-66.

Jagjivan Ram—b. Apr., 1908; educated at Banaras and Calcutta Universities; Secretary, Bihar Harijan Sevak Sangha, 1938; General Secretary, All-India Depressed Classes League till 1936 and its President, 1936-46; suffered im-

prisonment for Congress movement; Parliamentary Secretary of the Congress Ministry, 1937-39; Minister of the Congress Govt. Bihar, 1946; Labour Member, Interim Central Government, 1947; Leader, Indian Delegation to I.L.O. Conference, 1957; Minister of Railways, 1957-62; Minister of Communications & Transport, 1958-63; Minister of Labour, Employment and Rehabilitation, Govt. of India, from Jan. 1966.

Jha, Binodanand—b. Apr. 17, 1900 in Deoghar (Bihar); joined freedom movement in 1917 as a college student; was jailed for Congress cause in 1927, 1930, 1940 and 1942; Parliamentary Secretary to the first Congress Ministry in Bihar 1937; Medical and Local Self-Government Minister of Bihar, 1946-51; again joined Bihar cabinet as Revenue Minister, 1957-60; Chief Minister, Bihar, 1961-63.

Joshi, P. C., M.A., LL.B.—b, 1907; joined communist party when in college; convicted in Meerut Conspiracy Case for 5 years; edited the party weekly *National Front*, started party's new organ, *Peoples' War* (1942-45).

Kamath, Hari Vishnu—b. b. July 13, 1907; educated at Madras University; School of Economics, London and University College, London; joined I.C.S. (1930-39) but resigned; Secretary, National Planning Committee; joined Forward Bloc and became its Secretary; now P. S. P. leader; served several terms of imprisonment, 1940-46; Member,

Constituent Assembly, 1946 and Lok Sabha, 1946-52 and again from 1962.

Kabir, Humayun—b. Feb. 22, 1906; educated at Calcutta and Oxford; Secretary, Oxford Union Society, 1931; President, All-India Students' Congress and was the leader of the Krishak Praja Party in the Bengal Legislative Council, 1941-47; was also President of various organisations including All-Bengal Peasants' Party, Bengal-Assam Railway Employees' Association, etc.; was Professor of Calcutta and Andhra Universities; Assessor to the adjudicator in All-India Railway dispute, 1946; Member, Indian Railway Enquiry Committee, 1947; Deputy Leader, Indian Delegation at the 3rd General Conference of U.N.E.S.C.O., 1948; Educational Adviser and Secretary, Education Ministry, Government of India, 1952-56; President, Indian Philosophical Congress, 1947; Minister of State for Civil Aviation, Government of India, 1957-58; Minister, Scientific Research and Cultural Affairs, Government of India, 1958-62; author of many Bengali books and Editor, *Chaturanga*, 1963-65; Minister of Petroleum and Chemicals 1963-65; President, Indian Science Congress, 1964.

Kumaramangalam, Lt. General P. P.—b. July 1, 1913; was recipient of the award of Distinguished Service Order in the Middle East in the World War II; commissioned in the Indian Army on Aug. 31, 1933; Prisoner of War in Italy, 1942; commanded the 9th Independent Heavy Anti-aircraft

Regiment and 12th Independent Field Regiment, 1947; Commandant, Artillery School at Deolali, 1948; commander of an independent Para brigade, 1955; Promoted to the rank of Maj.-General, 1956; appointed Commandant, Defence Services Staff College, Wellington, 1959; appointed G.O.C.-in-C, Eastern Command in May, 1963; Vice-Chief of the Army Staff, 1965, Chief of the Army Staff from June, 1966.

Kanungo, Nityanand—b. May 4, 1900; graduated from Ravenshaw College, Cuttack; took his Law degree; joined the Non Co-operation Movement in 1921; established the nucleus of the Congress Party in Cuttack; elected to Lok Sabha in 1952; Chairman of the Textile Enquiry Committee in 1952; appointed Deputy Minister of Commerce and Industry in 1954; returned to the Second and Third Lok Sabha; was in sole charge of the Department of Industry in 1962; later became Minister for Civil Aviation and held the post upto 1965 when he became the Governor of Gujarat.

Karan Singh, Dr.—b. Mar. 9, 1931; son of Hari Singh, the ex-Maharaja of Jammu & Kashmir; became the constitutional head of Kashmir in 1949; was elected Sadar-i-Riyasat by the State's Constituent Assembly in 1952; educated at Srinagar, then at Doon School; passed Intermediate exam. from Allahabad University and B.A. from J. & K. University; Master's degree from Delhi Univ.; Chan-

cellor, J. & K. Univ.; now Governor of Jammu & Kashmir.

Katju, Dr. Kailash Nath—b. 17 June, 1887; joined Allahabad High Court, 1914; obtained LL.D. of Allahabad University, 1919; Chairman, Allahabad Municipal Board, 1935-37; Minister of Congress Government in U.P., 1937-39 and April, 1946—August, 1947; Member, A.I.C.C.; Editor of Allahabad Law Journal, 1918-46; imprisoned for 18 months for C. D. Movement; detained under Defence of India Rules, 1942-43; Governor, Orissa, 1947-48; Governor, West Bengal, 1948-51; Home (1951-52) and Defence Minister, India, 1951-56; was Chief Minister, Madhya Pradesh 1957-62.

Kothari, Dr. D. S.—educated at Allahabad and Cambridge; was the head of the Department of Physics, Delhi University and Scientific adviser to the Defence Ministry; his book on nuclear physics has been translated into German and Japanese; Chairman, University Grants Commission from 1961; Chairman, Education Commission, 1964.

Krishnamurti, J.—b. 1897 in Madras; was adopted by Annie Besant in 1909; proclaimed his spiritual powers; "Order of the Star in the East" was formed, headed by Krishnamurti, to prepare for a new Messiah; he disbanded the Order in 1929 and repudiated the idea.

Kripalani, Jiwatram Bhagwan-
das—1888; at Hyderabad (Sind); educated at Wilson College, Bombay, Dergussor College, Poona;

Professor of History, G.B.B. College, Muzaffarpur, 1912-17; gave up the post to join Mahatma Gandhi's Champaran Indigo Satyagraha, 1917; Lecturer, Banaras Hindu University, 1918-20; joined Non Co-operation Movement, 1920; imprisoned several times; started Gandhi Ashram for Khadi & village work, 1920; Principal, Gujarat Vidyapith; 1922-27; Member, Congress Working Committee; General Secretary of the Congress 1934-46; President of Congress, 1946-47; Member, Constituent Assembly, 1946-51; Member, Lok-Sabha 1957-62; left Congress in 1951 and organised the Krishak Mazdoor Praja Party which merged with Socialists and now known as P.S.P.; left this Party in 1960, elected M.P. in 1963; author of *The Gandhian Way*, *The Non-violent Revolution*, etc.

Kripalani, Mrs. Sucheta—b. June, 1908; educated at Delhi and Punjab Universities; after marriage with Acharya Kripalani, entered active politics, was Secretary of the Women's Department of the A. I. C. C., courted imprisonment during the freedom struggle; served as a member of the Constituent Assembly; was a member of the Congress Working Committee, member of the Indian delegation to the U.N. 1949; resigned from Congress and joined Kisan Majdoor Party; became an active member of the P.S.P.; was elected to Lok Sabha in 1952 and 1957 on the P.S.P. ticket; resigned P.S.P. and joined again Congress Party in 1958; one of the General Secretaries of A.I.C.C.; joined U.P. Cabinet as Labour Minister; became

the Chief Minister of U. P. from 1963—the first ever woman Chief Minister.

Kunzru, Pandit Hridaynath—b. Oct. 1, 1887; educated at Allahabad University and London School of Economics; joined Servants of India Society, 1909; Member, U.P. Legislative Council, 1921-23 and Central Assembly, 1927-30; President, National Liberal Federation, 1934; Member of the Council of States, 1937-57; President, Servants of India Society, 1936; Member, Constituent Assembly of India; Chairman, National Cadet Corps Committee, 1946-47; Delegate, Pacific Relations Conference, 1945; was member, States' Reorganisation Committee, 1953-55; Member, Rajya Sabha, 1956-62.

Krishnan, Dr. M. S.—b. in Madras; graduated with honours from the Presidency College, Madras; joined Royal College of Science, London in 1921, where he received D.Sc. and A.R.C.S. and also Ph.D. of London University in 1924; joined Geological Survey of India as an assistant superintendent, 1924; lecturer in Geology, Forest College, Dehra Dun 1927-29; professor of Geology, Presidency College, Calcutta, 1933-35; Assistant Director of Geological Survey of India, 1938-39; Superintending Geologist, 1945; Director, Geological Survey of India, 1939; Delegate, Royal Society Empire Scientific Conference, 1946; Representative of India at the U. N. Scientific Conference, 1948; Fellow of many learned scientific societies, such as, National Institute of Sciences, Indian

Academy of Science, Mineralogical Societies of England, France, Switzerland, Germany, America.

Krishnamachari, T. T.—b. Nov. 26, 1899; educated at Madras Christian College; entered business in 1921; Member, Madras Assembly, 1937; Member, Madras Assembly, 1942; Member, Constituent Assembly 1946; a Member of the Parliament ever since its inauguration with a single break, Minister of Commerce & Industry, Union Cabinet 1952; Minister of Iron and Steel, Union Cabinet 1955; Minister of Finance, Union Cabinet, 1957 but had to resign in 1958 over Mundra Affairs, rejoined Union Cabinet as Minister without portfolio in June 1962; Minister, Economic & Defence Co-ordination 1962; Minister of Finance, 1963-65.

Lohia, Dr. Rammonohar—b. 1910; educated at Banaras, Calcutta, Bombay and Berlin where he took Ph.D. degree; attended the Gaya Congress at the age of 14; was Secretary, Foreign Department of the Congress; took leading part in 'Quit India' Movement, 1942; was one of the founders of the Socialist Party in 1956; had gone to jail many times; joined Praja Socialist Party in 1953; left P.S.P. two years later to form Socialist Party; entered into the parliamentary career through a bye-election to the Third Lok Sabha; author of several books.

Masani, Minocher Rustom—b. Nov. 20, 1905; graduated from the Elphinstone College, Bombay and then went to London Univer-

sity to take a law degree; called to the Bar from Lincoln Inn; founded Congress Socialist Party at the Nasik Jail, 1934 and functioned as its Jt. Secretary till 1939; his association with C. S. P. came to an end at the outbreak of the 2nd World War; during the War courted imprisonment; elected to the Central Assembly in 1945; became member of the Constituent Assembly; Mayor of Bombay, 1943-44; ambassador to Brazil; became again Member of the Parliament, 1951-57; was associated with Tata Industries; prominent member of the National Productivity Council and All India Management Association; one of the founders of the Swatantra Party and its General Secretary; elected Independent M.P. in 1957; is a gifted writer; wrote the best-selling book for children 'Our India' and other books; elected M.P. by defeating Congress candidate in 1962.

Mahatab, Harekrushna—b. Nov. 21, 1899; educated at Ravenshaw College, Cuttack; joined Non Co-operation Movement in 1920; Chairman, Balasore District Board, 1924-28; Member, Bihar and Orissa Legislative Council, 1924; Editor, *Prajatantra* and *Rachana*; joined C. D. Movement, 1930-32; President, Utkal P.C.C. 1930 & 1937; Member, Congress Working Committee, 1938-46; was Chief Minister, Orissa, 1947-50; was Minister, Commerce and Industry, Government of India, 1950-52; Secretary-General, Congress Parliamentary Party, 1952-54; Governor of Bombay, 1955-56; Chief Minister,

Orissa, 1957-61; now Member of the Lok Sabha.

Maheshwari, Dr. Panchanan—

b. 1904 in Jaipur; took up B.Sc. course in Botany in Allahabad College; has to his credit a number of original contributions in the study of cryptogams, gymnosperms and angiosperms; his experimental embryology stand out as a pioneering effort; joined Delhi University in 1949; has served number of Universities; presided over numerous national and international conferences; was the first President of the International Society of Plant Morphologist; has many publications to his credit; acquired fame by the studies on artificial fertilisation of plants; a member of the American Botanical Society; a fellow of the American Academy of Arts and Sciences; a foreign member of the Kaiserlich Deutsche Akademie der Naturforscher Leopoldina of Halle; elected Fellow of the Royal Society, 1965.

Mallik, Bidhubhusan—was

educated at the Banaras Hindu College, Ewing Christian College, Allahabad, Lincoln's Inn, London where he was called to the Bar; joined Allahabad High Court, 1919 and in 1923 as a barrister; Judge, Allahabad High Court 1944; Chief Justice, Allahabad 1947-55; Member, Constitution Committee of the Federation of Malaya, 1956; Commissioner for linguistic minorities of India, 1956-62; Vice-Chancellor, Calcutta University from 1962.

Mahendra Pratap, Raja—b.

Dec. 1, 1886; joined secret revolutionary movement; toured almost

the whole world several times to organise armed revolution in India; President, Provincial Government of Hind, Kabul, 1915; Member of the Congress, 1906-52; Member of Parliament, 1951-62.

Mahmul, Dr. Syeed—b.

1889; educated in Aligarh, Cambridge and Germany; was General Secretary of the Khilafat Committee and of the All-India Congress Committee, 1923; Member of the Congress Working Committee, 1945-49; Minister of Education and Development in the first Bihar Congress Cabinet, 1937-39; again Minister, Development and Transport, 1947-51; jailed several times; Member, Lok Sabha; Minister of State, Central Cabinet, 1951-56.

Mehta, Dr. Jivaraj—b.

1887; educated at Baroda, Bombay & London; Chief Medical Officer, Baroda, 1921-24; President, Indian Medical Association for several years; Member, Medical Council of India, 1938-43; Fellow, University of Bombay; imprisoned in 1932-33 and 1942-44; Director-General, Health Services of India, 1948; Dewan, Baroda State, 1948; Minister of Bombay, 1949-60; Chief Minister, Gujarat, 1960-63; High Commissioner of India in London from 1963.

Mira Behn—b. Nov. 22, 1892;

daughter of Admiral Sir Edmund Slade. Her interest in music for Bethoven's works led her to Romain Rolland which in turn led her to Mahatma Gandhi; joined Mahatma Gandhi's Ashram at Sabarmati, Nov. 1925; accompanied Mahatma Gandhi to London in 1931 for

R.T.C.; suffered imprisonment during India's struggle for freedom; established an ashram and cattle development centre in Rishikesh forest in 1947.

Mehta, Gaganvihari Lal—b.

Apr. 15, 1890; educated at Bombay and London School of Economics; Assistant Editor of the *Bombay Chronicle*, 1923-25; Manager, Scindia Steam Navigation Co. at Calcutta, 1928-47; President, Indian Chamber of Commerce, 1939-40; President, Federation of Indian Chambers of Commerce, 1942-43; Member, Central Advisory Board of Education, 1943-47; Member, Constituent Assembly of India, 1947; Commissioner, Port of Calcutta for several years; President, Tariff Board 1947-50; Member, All-India Council of Technical Education, 1945; Chairman, India Tariff Commission, 1952; Member, Planning Commission 1950-52; Indian Ambassador to U.S.A., 1952-58; Chairman, Industrial Credit and Investment Corporation of India Ltd.; Chairman, National Shipping Board and Hindustan Shipyard; awarded *Padma Bibhusan* in 1958.

Mehta, Asoka—b. Oct. 24,

1911; educated at Wilson College, Bombay; imprisoned several times; one of the founders and prominent members of Congress Socialist Party of India, 1934; editor of the party organ, 1934-39; was Secretary, P.S.P. and its Chairman, 1959-63; was Member, Lok Sabha; was Chairman, Food Grains Enquiry Committee; Vice-Chairman, Planning Commission; Minister of Planning, Govt. of India from 1966.

Medhi, Bishnuram—b. Apr.

1890; educated at Gauhati and Presidency College, Calcutta; M.A. degree from Dacca College; joined Bar at Gauhati in 1914; joined Non co-operation movement in 1920 and was imprisoned for one year; advocate, Calcutta High Court; Member, Assam Legislative Assembly, 1946 & 1938; Minister of Finance and Revenue, Assam, 1946-50; Chief Minister, Assam, 1950-52; Chief Minister, Assam, for the second time in 1956 which he resigned in 1957; Joint Secretary, Congress Session, Gauhati, 1930; President, Assam P.C.C., 1930-39; First Congress Chairman, Gauhati Local Board; Governor of Madras.

Mahalanobis, P. C.—b. June

29, 1893; educated at Brahmo Boys School & Presidency College, Calcutta; received Tripos, Cambridge University; Senior Research Scholar at King's College, Cambridge; professor, Presidency College, Calcutta, 1922-42; Hony. Secretary, Visva-Bharati, 1921-31; Sectional President, Indian Science Congress, 1925, 1942; Secretary & Director, Indian Statistical Institute from 1931; Editor, *Sankhya* for several years; Statistical Adviser to many Government Committees and Commissions; Calcutta University Professor of Statistics, 1941-45; Principal, Presidency College, Calcutta, 1945-58; General Secretary, Indian Science Congress, 1945-48; elected F.R.S., 1945; President, Indian Science Congress, 1950; Leader, Indian delegation, U.S.S.R. Academy of Sciences, Moscow, 1954; Chairman, E.C.A.F.E. Conference

of Statisticians, Bangkok, 1952; Statistical Adviser to Central Cabinet since 1949; received diploma of foreign member, U.S.S.R. Academy of Sciences, 1959; Member, Planning Commission.

Mitra, Premendra—b. 1904;

Eminent Bengali writer and poet; began his literary career in his college days; has edited numerous magazines and periodicals; has written numerous stories and novels; also a well-known writer of juvenile literature; received Sahitya Akademi Award and Rabindra Memorial Prize for his book of poems, '*Sagar Theke Phera*'; was an organiser of A.I.R.; received *Padma Sree* in 1961.

Misra, Dwarka Prasad—b.

1901; was elected to the Central Assembly at the age of 20; was editor of *Lokmat* and *Sharada*; left Congress and fought two elections, first as a PSP man and then as an Independent between 1951 and 1955 but was defeated; left the M. P. Ministry in which he was Chief Minister in 1951; returned as Chief Minister in 1963.

Menon, K. P. S.—b. Oct. 18,

1898; educated at St. Xavier's College, Madras and Oxford; joined I.C.S. in 1921; served in Madras Presidency till Feb., 1925; Govt. of India's Agent in Ceylon, 1929-33; deputed by Govt. of India to enquire into the position of Indians in Zanzibar, Kenya and Uganda, 1934; Chief Minister, Bharatpur State and Political Agent, Western Rajputana States, 1940-43; Agent-General, Govt. of India in China, 1943-47; Chairman, U. N.

Commission on Korea, 1948; Secretary-General, External Affairs, Government of India, 1948-52; Indian Ambassador in U.S.S.R., 1952; awarded *Padma Bhushan*, 1957; author of several books in English.

Menon, V. K. Krishna—b. May

3, 1897; educated at Malabar, Madras and London; Secretary, India League (London), 1929-47; First Editor, Pelican Books, 20th Century Library (Bodley Head); Councillor, St. Pancras, London, 1943-47; Special Representative, Government of India, 1946-47; represented India in various International Congress; High Commissioner for India in London, 1947-52; Indian delegate to U.N., Nov. 1952-53; Minister without portfolio, Government of India, 1952; received *Padma Bhushan*, 1954; Minister of Defence, India, 1957-62.

Menon, Sm. Lakshmi N.—b.

1899; educated at Trivandrum, Madras, and London; was lecturer, Queen Mary's College, Madras, 1922-25 and Isabella Thoburn College, Lucknow, 1930-33; alternate delegate of India to the U.N. General Assembly in Paris, 1948 and New York, 1950; also represented India at the 3rd session of the Commission on status of women; Parliamentary Secretary, Ministry of External Affairs, 1953-57; Dy. Minister of External Affairs, 1957-65.

Mody, Sir Homi P.—b. Sept.

23, 1881; Member, Municipal Corporation, Bombay, 1913-14; and its President, 1923-24; Chairman, Mill-Owners' Association, Bombay, 1929-34; President, Indian Mer-

chants' Chamber, 1928; President, Employees' Federation of India, 1933-41; attended Round Table Conference, 1930; Member, Viceroy's Executive Council, 1931-43; Member, Indian Constituent Assembly, 1948-49; Director, Tata Sons Ltd.; Delegate, I. L. Conference, Geneva, 1937; Governor of Bombay; Governor of Uttar Pradesh, 1949-52.

Mudaliar, Sir A. Ramaswami—
b. Oct. 14, 1887; educated at Christian College and Law College, Madras; Advocate, Madras; Member, Madras Legislative Council, 1921-26; Mayor, Madras Corporation, 1938-40; Member, Council of States, 1930; Member, Indian Legislative Assembly, 1931-34; Delegate, Round Table Conference; Leader, Indian delegation to the British Commonwealth Relations Conference, Toronto, 1933; Member, Economic Committee of the League of Nations; Member, Viceroy's Executive Council, 1939-42; Member, Imperial War Cabinet and Pacific War Council, 1942-43; President of Social and Economic Council of U.N., 1946 and 1947; Member, Indian delegation to U.N., 1945; Dewan of Mysore, 1946-49; Member, Indian Parliament, 1952; Vice-Chancellor, Travancore University; Chairman, Indian Steamship Co., Ltd. since 1947, was Member, Rajya Sabha.

Munshi, K. M.—b. Dec. 30, 1887; educated at Baroda and Bombay; enrolled as Advocate, High Court, 1913; was a joint Editor of *Young India* in 1915; Editor, *Gujarat*, 1922-31; Secretary, Bombay Home Rule League, 1919-20;

Fellow, Bombay University; Member, Bombay Legislative Council, 1927-30; Member, Baroda University Commission, 1926; Member, All-India Congress Committee, 1931-37; Home Minister, Bombay, 1937-39; a well-known Gujarati novelist; left Congress in 1941 but rejoined in 1946; Agent-General of India, Hyderabad, 1947-48; Minister of Food & Agriculture, India, 1950-52; Governor, U.P., 1952-57; Kulpathi, Bharatiya Vidya Bhavan; a prominent member of Swatantra Party.

Mukherji, Dr. Hirendranath—b. Nov. 23, 1907; educated at Calcutta University, St. Catherine's, Oxford and Lincoln's Inn, London; lecturer, Andhra Univ., 1934-35; Head of the Department of History, Surendranath College, Calcutta; lecturer, Post Graduate Department, Calcutta University, 1940-45; Member, Executive Committee, Bengal P.C.C., 1938-39; Member, A.I.C.C. 1938-39; Foundation member, Friends of the Soviet Union, 1941; Editor, *Indo-Soviet Journal*, 1941-45; Associate Editor, *Calcutta Weekly Notes*, 1945-52; Member, Bengal State Committee, Communist Party of India, 1947; Member, Lok Sabha from 1951; now Dy. Leader of the Communist Party of India in Lok Sabha; author of many books.

Mukherji, Sir Biren—b. 1899; educated at Hastings House, Calcutta, B. E. College, Sibpore and Trinity College, Cambridge; is the Managing Director of the well-known firm of Martin-Burn Ltd., and also of Indian Iron & Steel Co.;

youngest son of Sir Rajendranath Mukherji; joined the firm of Martin & Co. in 1924; became a partner of Burn & Co. in 1931 and of Martin & Co. Ltd., in 1943; Sheriff of Calcutta, 1940-41; was member of the National Defence Council.

Nadar, Kamraj—b. 1903; President of the Tamil Nad Congress Committee, 1939-52, excepting six months; Member, Madras Legislative Assembly, 1936 and 1946; Leader, Madras Legislative, Congress Party, 1954 consequent on the retirement of Mr. C. Rajagopalachari; Chief Minister, Madras, 1954-63, President of the Congress from 1964.

Naga, Kalidas—b. Jan. 15, 1892; educated at Calcutta and Paris Universities; Professor, Scottish Church College, Calcutta, 1915-19; Principal, Mahendra College, Galle, Ceylon; representative of the Calcutta University, International Conference of Libraries and Librarians, Paris, 1923; Lecturer, Calcutta University, 1923-55; visiting Professor, University of Hawaii; Delegate, 2nd British Commonwealth Relations Conference, Sydney, 1938; Secretary, Asiatic Society Calcutta, 1942-46; Member, Rajya Sabha, 1952-54.

Namboodiripad, E. M. S.—b. June 14, 1909; entered active political field during Civil Disobedience Movement in 1932; formed with his friends Kerala Congress Socialist Party in 1934; was for some time Joint Secretary, All-India Congress Socialist Party; founder-member, Kerala Commu-

nist Party, 1937; a prominent member of the Central Committee of the Communist Party of India and Member of the Politbureau since 1951; Chief Minister of Kerala from 1957-59, journalist and writer in both English and Malayalam; visited People's Republic of China.

Nanda, Gulzarilal—b. July 4, 1898; educated at Lahore, Agra and Allahabad; Member, Bombay Assembly, 1937; Labour Minister, Bombay, 1948-50; Vice-Chairman, Planning Commission of the Government of India from 1950; Planning Minister of the Union Government, Sept. 1951; Minister of Planning, Irrigation and Power, 1957; Minister of Planning, Labour and Employment, 1962; Home Minister, India from 1962.

Naidu, Sm. Padmaja—b. Nov. 17, 1900 at Hyderabad, daughter of Late Sarojini Naidu, famous poetess and politicians; joined Congress at Hyderabad in 1929; was arrested and interned for political cause in 1942; Member Lok Sabha, 1950-51; was a Member of Senate, Osmania University, Hyderabad; Governor of W. Bengal from 1956.

Narlikar, Dr. Jayant Vishnu—b. at Kolhapur, July 10, 1938; moved to Banaras when his father was appointed professor at the Banaras University; educated at the Banaras Hindu University; graduated (B.Sc.) with distinction in 1957; soon afterwards came to Cambridge University, read at the Kings College; Fellow of the Kings College in 1963; propounded the new theory of gravi-

ty in collaboration with Prof. Hoyle.

Nayyar, Dr. Sushila—b. 1914; graduated from Lady Hardinge Medical College, Delhi; came in contact with Mahatma Gandhi in 1930; jailed in 1942 & 1944; was Secretary, Kasturba Trust Medical Board; toured Noakhali with Mahatma Gandhi during communal riots, 1946; worked for the recovery of abducted Muslim women in Punjab, 1948; toured America, England and Scandinavia, 1948-59 and took medical graduate's course at John Hopkins University, U.S.A.; Minister of Health, India, from 1962.

Pal, Dr. Radhabinod, M.A. vocate, Calcutta High Court from 1921; Tagore Law Professor, Calcutta University for 3 times; attended the International Congress of Comparative Law, 1927 and was elected President of the International Assembly of Comparative Law; Judge, Calcutta High Court, 1941-43; Vice-Chancellor, Calcutta University, 1944-46; Judge, International Military Tribunal for trial of war criminals for the Far East in Tokyo, 1946-48; Member, International Law Commission, 1952; author of several law books; awarded *Padma Bibhusan*, 1959; National Professor of India (*Jurisprudence*), from 1959.

Pandit, Mrs. Vijayalakshmi—b. August 18, 1900; the first woman Minister in India; took active part in the Congress movements of 1930 and 1932; President, All-India Women's Conference, 1941; sent to jail in 1930 and 1942; took extensive tour to America in 1944-45; again Congress Minister of U.P.,

1946; leader of Indian Delegation to U.N., 1946, 1947, 1948, 1952 and 1953; Ambassador to U.S.S.R., 1947-49 and U.S.A., 1949-51; President, U. N. General Assembly, 1953-54; High Commissioner for India in London, 1956-62; received Honorary Doctorates from many Universities; Governor of Maharashtra, 1962-64; elected M.P., in 1964.

Pant, Sumitra Nandan—an eminent Hindi poet; his works include great poetic anthologies, such as *Swarna Dhuli*, *Swarna Kiran*, *Veena* and *Granthi*; gave up education during Non Co-operation Movement and worked in close association with Mahatma Gandhi.

Patil, S. K.—b. Aug. 14, 1900 in Swantwadi; educated at St. Xaviers' College and London University College; took a diploma on journalism during Non co-operation movement; was for a time on the Staff of the *Bombay Chronicle*, drawn into the national movement in twenties; was General Secretary of the Bombay P. C. C. for 17 years and its President for another 10 years; was Member of the Bombay Corporation for 20 years; was Mayor of Bombay for three terms (1949-1952); Minister of Food, Govt. of India, 1957-60; now Minister of Railways from 1964.

Prakasa, Sri—b. Aug. 3, 1890; educated at Allahabad and Cambridge; called to the Bar in 1914; was connected with Banaras Hindu University, 1914-17; Member, Banaras Municipal Board, 1921-25; member, A.I.C.C., 1938-45; President, U.P.C.C., 1934-35; General

Secretary, Congress, 1929-31; Member, Central Assembly, 1935-46; was imprisoned five times during the national movement; India's High Commissioner in Pakistan, 1947-49; Governor of Assam, 1949-50; Minister of Commerce, Central Government, 1950-51; Governor of Madras, 1952-56; Governor of Bombay, 1956-62.

Paranjape, Sir R. P.—b. Feb. 16, 1876; was Vice-Chancellor, Lucknow University; educated at Fergusson College, Poona, St. John's College, Cambridge, Paris and Gottingen; Senior Wrangler of Cambridge, 1899; Principal and Professor, Fergusson College, 1902-26; Minister of Education, Bombay, 1921-23 & 1929; President, Indian Liberal Federation; Fellow, Bombay University, 1905-07; Member, Bombay Legislative Council, 1913-16; Vice-Chancellor, Indian Women's University, 1916-20; Member, India Council, 1927-32; High Commissioner for India in Australia, 1944.

Patnaik, Bijayanand—b. at Tulsipur, Cuttack; read upto B.Sc. in Ravenshaw College, Cuttack; joined National Airways and became one of its pilots; was jailed for 32 months (1943-45) for political cause; Member, Orissa Assembly, 1946; flew to Indonesia to watch independence movement there and flew the then Indonesian Premier to New Delhi; a great industrialist of Orissa with textile mills, cotton mills, Kalinga Airways, Kalinga Tubes; donor of £1000 Kalinga prize through UNESCO; Chief Minister, Orissa, 1961-63.

Ranga, N. G.—b. Niv. 7, 1900; educated at Oxford; Professor of Economics, Parchyappa's College, Madras, 1927-30; Member, Congress Working Committee, 1948; President, All-India Kishan Congress, Rural People's Federation, Andhra Provincial Congress Committee; was member of the Indian Parliament, All-India Handloom Weavers' Congress; India's delegate to FAO Conference, Copenhagen, 1940 and I.L.O. Conference, San Francisco, 1948; led Indian delegation to London (1946) and the Hague (1947) Conferences of International Federation of Agricultural Products; resigned Congress in 1951; started Krishikar Lok Party; now Chairman of the Swatantra Party; Member, Lok Sabha.

Ray, Ananda Sankar—b. Mar. 15, 1904 in Orissa; educated at Patna University and London; Member, Indian Civil Service, 1929-51; prematurely retired as Judicial Secretary, Government of West Bengal; Bengali writer; early writings in Oriya and Bengali; author of Bengali novels, short stories, essays and poems including "Satyasatya," an epic novel in six volumes; Member, Sahitya Akademi Executive Board, 1954-57; Delegate, International P. E. N. Congress, Japan, 1957; received Sahitya Academy Award, 1963; visited Europe in 1963.

Raman, Sir Chandrasekhara Venkata—b. Nov. 7, 1888 at Trichinopoly; educated at Hindu College, Madras; graduated in 1904 and got Master's Degree three years

later; Asst. Accountant General after winning first place in a competitive examination; came to Calcutta in 1909 where he began his scientific researches; Palit Professor of Physics, Calcutta University, 1917; visited Europe in 1921 as a delegate to the Congress of the Universities of British Empire; became Ghose Travelling Fellow, 1924; became Fellow of the Royal Society, 1924; represented India at the centenary of Franklin Institute of Philadelphia; represented India at the bicentenary of the Russian Academy of Sciences in U.S.S.R., 1925; discovered the phenomena known as '*Raman Effect*' in 1928; received Meaucci Medal, Rome, 1928; President, Indian Science Congress, 1928; created Knight, 1929; awarded Nobel Prize for physics, 1930; received Hughes Medal of the Royal Society, 1940; resigned Calcutta University Professorship, 1933; Director, Bangalore Science Institute; founded Raman Institute, Bangalore, 1943; awarded Franklin Medal of America, 1951; Fellow, Franklin Institute, Royal Irish Academy, etc.; *Bharat Ratna*, 1954; National Professor of India from 1949.

Ram Kishan—b. in Western jab in 1913. Joined political movement at the inspiration of Lala Lajpat Rai; was jailed in 1929, 1930, 1931, 1934, 1941 and 1942 for political cause; was member of the Lahore Municipal Committee; Member of the A.I.C.C.; became leader of Jullunder after partition; devoted most of his time for refugees and became their

leader; was elected in the Punjab Legislative Assembly; Secretary of the P.C.C. in 1952; was a Minister in Kairon Cabinet in 1956; became Chief Minister of Punjab after the fall of Kairon Ministry in 1964.

Radhakrishnan, Sir Sarvepalli—M.A., D.Litt., F.A.B.—b. Sept. 5, 1888; was educated in Madras Christian College; was Professor of Philosophy, Presidency College, Madras (1916-17), George V Professor of Philosophy, Calcutta University (1921-31 & 1939-41); Vice-Chancellor, Banaras Hindu University (1939-49); President, Indian Philosophical Congress, 1927 & 1950; Hibbert Lecturer, Oxford University (1929); was Spalding Professor of Eastern Religions, Oxford; Member of the International Committee on Intellectual Co-operation, League of Nations (1931-39); Chancellor, Delhi University, 1943; Honorary Fellow, Asiatic Society of Bengal; President, Indian Universities Commission, 1948; Leader of the Indian Delegation to UNESCO, 1946, 1947, 1948, 1949 and 1950; India's Ambassador to U.S.S.R., 1949-52; Vice-President of India, 1952-62; President of India from 1962; *Bharat Ratna*, 1954; author of *Indian Philosophy* (2 vols.); *Hindu View of Life*; *Kalki*; *Philosophy of the Upanishads*; *Bhagwad Gita*; *Upanishads*; *Bhagwad Gita*.

Raj Bahadur—b. Aug. 21, 1912; took an active part in the Civil Disobedience Movement in 1930; was educated at Sadar High School, Bharatpur State (Rajasthan) and graduated from St. John's College, Agra; was Municipal Commissioner

of Bharatpur in 1942; was imprisoned several times for participating in the Freedom struggle; was a member of the Constituent Assembly, 1948-50 and of the Provincial Parliament, 1950-52; Member of the Lok Sabha since 1952; was appointed Deputy Minister of Communications in 1952 and became Minister for Communications in 1956; a year later he was made Minister of State in the Ministry of Transport and Communications; was appointed Minister of Shipping in the same Ministry in 1962; became the Minister of Transport in 1963; from Aug. 1965, he is also in charge of the Civil Aviation Dept.

Rajagopalachari, C., B.A., B.L.
—b. 1879, graduated from Central College, Bangalore and passed law from the Law College, Madras; joined Bar in 1900 at Salem; gave up his practice and joined Rowlatt Act Satyagraha campaign, 1919; served many years in imprisonment; edited Gandhiji's *Young India*; General Secretary of the Congress, 1921-22; Member, Working Committee of Congress, 1941; and again in 1946; President, Tamil Nad Congress Committee till 1935; was Chief Minister of the Congress Ministry at Madras, 1937-39; left Congress in 1942 due to the difference of opinion but rejoined in 1945; Member, Interim Government, 1946-47; Governor, West Bengal, 1947-48; Governor-General of India, 1948-50; Minister of Home Affairs, Govt. of India, 1950-51; Chief Minister, Madras, 1952-54; *Bharat Ratna*, 1955; well-known

author of many Tamil and English books; one of the founders of Swatantra Party; visited England and America, 1962.

Ray, Satyajit—b. in Calcutta in 1921; son of late Sukumar Roy, well-known as an artist and a famous writer of children's literature; after graduation, joined 'Kalabhavan' of Santiniketan; joined a British advertising agency as artist in 1943; started along with others Calcutta Film Society in 1947; produced *Pather Panchali* in 1952 and won President's Gold Medal in 1955; awarded highest prize at the Cannes Film Festival, France in 1955; received Golden Lion Prize at Venice for *Aparajita*; his other productions are: *Parash Pathar*, *Jalsaghar*, *Apur Sansar*, *Devi*, *Tin Kanya*, *Charulata*, etc.; received Sangit Natak Akademi Award as 'Director of the Year, 1959' was awarded *Padma Shri* and *Padma Bhushan* (1965).

Rao, Dr. K. L.—b. July 15, 1902; took his Master's degree in engineering from Madras University; later Birmingham University (U.K.) conferred the Doctorate degree on him; had worked as Asst. Professor in the Loughborough Engineering College, U.K.; was thrice awarded the President's Prize for the best technical paper published in the Institution of Engineers (India) Journal; was responsible for designing important dams like Lower Bhavani, Nagarjunasagar, Kosi, Hirakud and Chambal; was President of the Central Board of Irrigation and Power before he entered Lok Sabha in 1962; was

awarded *Padma Bhusan* in 1963; new Minister of Irrigation and Power in the Central Cabinet.

Rao, Dr. V.K.R.V.—b. July 7, 1908, represented India on International Food Conferences at Quebec, Washington and Copenhagen; Director of Statistics and afterwards Planning Adviser, Ministry of Food, Government of India; Food Adviser, Indian Embassy, Washington, 1946-47; Chairman, U. N. Sub-Commission on Economic Development, 1947-50; Member, governing council, International Association for research in income and wealth, 1947-51; Past President, Indian Economic Association, 1949; was member, Central Board of Film Censors, Press Commission, Advisory Board and National Income Committee; was Head of the Dept. of Economics, Delhi Univ. and Founder-Director, Delhi School of Economics; Vice-Chancellor, Delhi Univ., 1957-60; now Member of the Planning Commission.

Reddy, Neelam Sanjiva—b. May 19, 1913; Secy., Andhra P.C.C., 1936-46; suffered imprisonment several times; Member, Madras Legislative Assembly, 1946; Member, Indian Constituent Assembly, 1947; Minister, Madras Government, 1949-51; Member, Rajya Sabha, 1952-53; Dy. Chief Minister, Andhra Pradesh, 1956-60; Chief Minister, Andhra Pradesh, 1956-60; President, I. N. Congress 1960, was Union Minister for Steel and Mines, 1964-65 now Cabinet Minister, Central Govt. for Transport & Civil Aviation from 1966.

Rukmini Devi—b. Feb. 29, 1904 at Madura; married in 1920 to late Dr. G. S. Arundale, President, Theosophical Society; started dancing at an early age; exponent of Indian dance and music, specialising in Bharata Natyam, music, drama, painting and crafts; made extensive tours in different countries with dance recitals and lectures; Member, Indian National Commission for Co-operation with UNESCO; President, Kalakshetra International Arts Centre, Adyar, Madras; was Member, Rajya Sabha; was awarded *Padma Bhusan*, 1965.

Sahai, Bhagwan—is an I.C.S.; Chief Secretary to the U.P. Govt. for a long time; was Chief Commissioner of Delhi for a couple of years; subsequently appointed Lt. Governor of Himachal Pradesh; *Padma Bhusan*, 1961; Governor of Kerala from 1966.

Dr. Sampurnanand—b. Jan. 1, 1891; graduated in 1919 from St. Columbas College, Hazaribagh; started as a school master; worked at Daly College, Indore, 1915-18; was Professor, Kashi Vidyapith, 1922; was member, A.I.C.C.; was Secy., U. P. Provincial Congress Committee and President, Second All-India Socialist Conference; was Minister of Education, U.P., 1938-39; Minister of Education, Finance and Labour, U.P., 1947-52; again Minister of U.P. Government, 1952-54; Chief Minister, U.P., 1955-60; Governor of Rajasthan from 1962.

Santhanam, K.—b. 1895; graduated in 1917; enrolled in High Court, Madras, 1920; gave up practice in the same year; was in

jail for several years for Non-Co-operation Movement; was editor, *Indian Express*, 1933-40; Member, Indian Legislative Assembly, 1937-42; Member, Constituent Assembly; Minister of State, Govt. of India; was Governor, Vindhya Pradesh; was Chairman, Finance Commission.

Sahay, Krishna Ballabh—b. Dec. 31, 1898; gave up his study in 1921 and joined Non-Co-operation Movement; suffered imprisonment four times between 1930 and 1934; also imprisoned in 1942 for individual civil disobedience, in 1914 for August Movement; entered Bihar Legislature in 1944; appointed Parliamentary Secretary to the Chief Minister of Bihar; became Revenue Minister in 1946 and later, Minister of Forest; now Chief Minister of Bihar from 1963.

Sanjivayya, D.—b. Feb. 14, 1921 in Kunnur district; graduated from the Govt. Art College, Anantapur and took law degree from Madras; enrolled as an advocate; elected Member, Madras Legislative Assembly, 1952; Minister of Housing & Co-operation, Madras Govt., 1952-53; after separation of Andhra in 1953 he became a member of the Andhra Cabinet upto 1955 and took over the Chief Ministership in 1960; elected Congress President in 1962; Minister of Labour and Employment, Govt. of India, 1963-65, now Minister of Industry, Govt. of India from 1966.

Sanyal, Probodh Kumar—b. July 7, 1905; educated at Scottish Churches College, Calcutta;

travelled extensively in India, Burma, Tibet, Pakistan, Soviet Union, West Germany, etc.; Delegate, Afro-Asian Writers' Conference at Tashkent, 1958; author of a number of well-known novels, short stories, travelogues, etc., in Bengali.

Sen, Asoke Kumar—b. Oct. 19, 1913; educated at Calcutta and London; qualified for the Bar from Grey's Inn in 1941 and joined Calcutta Bar in the same year; Professor, Law and Economics, City College, Calcutta, 1941-43; Junior Standing Counsel in 1950; Delegate to the 10th Session of the U.N., 1955; was elected to Lok Sabha from Calcutta N.E. constituency; Minister of Law, Govt. of India, 1957-65.

Sen, Benoy Ranjan—b. Jan. 1, 1898; educated at Calcutta and Oxford; entered I.C.S. in 1922; Secretary, Government of Bengal and then Press Officer during 1931-34; Revenue Secy., Govt. of Bengal, 1940-43; Director of Civil Evacuation, 1942-43; Relief Commissioner, 1942-43; Director-General of Food, Government of India, 1943-56; Secy., Department of Food, Government of India, 1946; Minister to the Embassy of India in U.S.A., 1947-50; Indian Ambassador to Italy and Yugoslavia, 1950-51 and 1953-54; Indian Ambassador to U.S.A., 1951-52; Member, Indian delegation to U. N. General Assembly, 1947; Head of the Indian delegation, Economic and Social Council of the U.N. in 1949 & 1953 and also at the annual conference of F.A.O. in 1949 and F.A.O. Council in 1950, 1951 and 1953; Indian Ambassador to

Japan, 1954-56; now Director-General, F.A.O. from 1956.

Sen, Prafulla Chandra—b. in Shahabad district of Bihar; took B.Sc. degree at Calcutta in 1918; became articled apprentice to a firm of incorporated accountants; joined nationalist movement in 1920 and served as a relief worker during Tarakeswar flood in 1922 in Arambag, Hooghly district; spent over 11 years of his life as political prisoner; became Food Minister of the West Bengal Government in 1948; was elected leader of the Congress party in 1962 after the death of Dr. B. C. Roy; now Chief Minister of West Bengal from 1962.

Singh, Air Marshal Arjan—b. Apr. 15, 1919; matriculated from the Government High School, Lyallpur, Punjab; later studied at the Government College, Lahore; a Cadet of the 4th Battalion of the Punjab Univ. Training Corps; joined R.A.F. Academy at Cranwell; was commissioned in 1939; served with the No. 1 Squadron of the R.I.A.F.; was the first pilot of the I.A.F. to be decorated with the Distinguished Flying Cross on the field on the Arakan front by the Supreme Commander of S.E.A.C., Lord Mountbatten in 1944; was the Commanding Officer of 'Exercise Siksha'; was appointed Chief of the Air Staff on Aug. 1, 1964, awarded *Padma Vibhushan*, Nov., 1965.

Singh, Master Tara—b. June 24, 1885 in Hindu family; embraced Sikh religion at the age of 17; began his life as a teacher;

took prominent part in Nankana Sahib agitation; joined C. D. Movement in 1930; a prominent Sikh Akali leader; was once a prominent member of the Congress Party; was President, Shiromoni Gurdwara Prabandak Committee; has suffered imprisonment for political cause; an ardent supporter of the Punjabi Suba.

Singh, Jaipal—b. Jan. 3, 1903 in Ranchi district; belongs to Adibasi race; educated at Ranchi and Oxford; was I.C.S. probationer at Oxford, 1927-28 which he resigned; leading hockey player of India and was Captain of the Indian Olympic Hockey Team, 1928; first Indian to get full Oxford Blue; was in Colonial Service in British East Africa, 1933-36; Colonisation Minister and Revenue Commissioner, Bikaner, 1937-38; editor, *Adibasi Sakam*; Member, Board of Secondary Education, Bihar; was Member, Constituent Assembly of India; now Member, Lok Sabha and President, Jharkhand Party.

Singh, Sant Nihal—b. June 2, 1884; educated at Punjab University; author, journalist, lecturer, traveller; served as special correspondent of the *Observer* (London) and other papers during Prince of Wales's visit to India, 1921-22; contributed to magazines, newspapers, reviews all over the world; has lectured before prominent societies; author of many books; was contributor to *The Hindu* (Madras), *Literary Digest* (U.S.A.).

Singh, Sardar Swaran—b. in 1907; educated at the Govern-

ment College, Lahore; enrolled as an advocate at Jullundur, 1932; Member, Punjab Assembly, 1956; Minister of Development and Civil Supplies in the Punjab Cabinet, 1946; Home Minister, 1947-49; Minister, for Capital Projects & Electricity, 1952; Union Minister for Works, Housing and Supply, 1952; Union Minister of Steel, Mines and Fuel, 1957; Union Minister of Railways, 1962; now Minister, External Affairs, Govt. of India from 1964.

Sinha, Satyanarain—b. at Darbhanga; educated at Muzffarpur and Patna; started his political career with a term of imprisonment in 1920 for non-co-operation; Member, Bihar Legislature, 1926-39; Chief Whip, Congress Party in Central Assembly and also in Constituent Assembly; Minister of State for Parliamentary Affairs, Govt. of India, 1949-65; now Minister of Parliamentary Affairs, Govt. of India from 1966.

Sokhey, Major-General Sir Sahib Singh—b. Dec. 15, 1887; obtained medical degree in Edinburgh and London; did post-graduate work in John Hopkins University, Harvard Medical School, Toronto Medical School and Trinity College, Cambridge; joined I.M.S. in 1913; served in the World War I, 1915-21; Rockefeller Foundation Fellow, 1923-25; joined Haffkine Institute in 1925 as Asst. Director; was its Director, 1932-49; Assistant Director-General, WHO, 1910-52; winner of Stalin Peace Prize, 1953.

Tara Chand, Dr.—b. 1888; educated at Delhi, Meerut, Allaha-

bad and Oxford; Professor of History at the Kayastha Pathshala College, Allahabad and then its Principal for 20 years; was Vice-Chancellor, Allahabad University; was Secretary, Ministry of Education, Govt. of India; was Indian Ambassador to Iran and Afghanistan; author of *Influence of Islam on Indian Culture*, *Short History of the Indian People*.

Tata, Ratanji Dadabhoy Jhangir—b. July, 1904; educated in India, France and Japan; first pilot to qualify in India; holds 'A' and 'B' licences; is Chairman of the Board of Air India International Corporation; Member, Indian Airlines Corporation; Director, Hindustan Aircraft Ltd.; Chairman, Tata Industries; was Member, Indian delegation to the third session of U.N. General Assembly, Paris, 1948; Honorary Group Captain, I.A.F.; Honorary D.Sc., Allahabad University; Officer of the Legion of Honour, France; awarded "International Management Man" by the National Association of Foreman, U.S.A.; awarded *Padma Bhushan*.

Thacker, M. S.—educated at Ahmedabad and Bombay; graduated in engineering from Bristol University; worked in Calcutta Electric Supply Corporation, 1932-1947; Professor of Power Engineering, Indian Institute of Science, Bangalore, 1947-49; Director, Indian Institute of Science, 1949-55; President, Indian Science Congress, 1947-48; President, Institute of Engineers, 1956; President, Insti-

tute of Metals, 1955-56 ; now Member, Planning Commission.

Thakurdas, Sir Purshottamdas,—b. May 30, 1881 ; was educated at the Elphinstone College and joined the firm of Narandas Jayram, 1902 ; Sheriff of Bombay, 1920 ; Member, Incharge Committee ; Member, Council of State, 1922-23 ; Member, Legislative Assembly, 1924-30 ; thrice President, Indian Merchants' Chamber ; President, Indian Chamber of Commerce ; Member, Royal Commission on Currency, 1926 ; Vice-Chairman, Indian Central Banking Enquiry Committee.

Tyabji D. F. H. B.—b. Nov. 1907 ; educated at Bombay and Balliol College, Oxford ; passed I.C.S. and served Punjab and Central Governments in different capacities ; was Indian Ambassador to Indonesia, Iran and Germany ; Special Secretary, Ministry of External Affairs, Government of India ; now Vice-Chancellor, Aligarh Muslim University from 1962.

Uday Shankar—b. in Udaypur ; studied in Banaras and at Bombay Art College ; was admitted in the Royal College of Arts, London ; started taking training in the plastic art under the guidance of Sir William Rothenstein ; joined famous Russian dancer Anna Pavlova ; made his own company and toured round the world ; opened culture centre in Almora, U.P., which was closed down during World War II.

Wadia, Dr. D. N. joined Geological Survey of India in 1921 ; became Superintending Geologist a few years later ; a devoted research worker, well-known for valuable studies regarding geology of the Himalayan region ; founded the Indian Bureau of Mines and became its first Director ; was for some time, President of the Mining and Geological Institute and was twice President of the Indian Science Congress ; Fellow of the Royal Society, 1957 ; honorary member, Geological Society of U.S.A.

ADDENDA

U. N. Membership—Singapore and the Maldive Islands on 20 September, 1965 and Gambia on 21 September, 1965.

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Longest Road Bridge—Sone Barrage Bridge (4,616 ft.), India.

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President of Congo—Joseph Mobutu.

Premier of Congo—Leonard Mulumba.

Sheikh of Kuwait—Sheikh Salbah El Salem El Sabah.

Premier of Kuwait—Sheikh Jaber Al-Ahmed Al-Sabbah.

President of Dahomy—Tairou Congacon.

President of U.S.S.R.—Nikolai V. Podgorny.

Premier of Afghanistan—Mohammed Hashim Maiwandwal.

President of Upper Volta—Lt.Col. Sangoula Lamizana.

President of Switzerland—Dr. Hans Schaffner.

Premier of Iraq—Dr. Abdul Rahman Bazzaz.

President of Syria—Dr. Nouredin Atassi.

Premier of Syria—Dr. Youssef Zayyen.

Premier of Australia—Harold Holt.

Nigeria's Military Ruler—Maj.-Gen. Aguiyui Ironsi.

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Vice-Chancellor of Poona University—Prof. N. S. Kulkarni.

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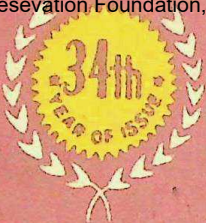
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